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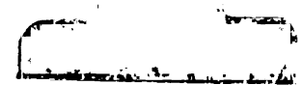


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THE

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A Fund for this purpose has been opened in the Egyptian Expeditionary Force.

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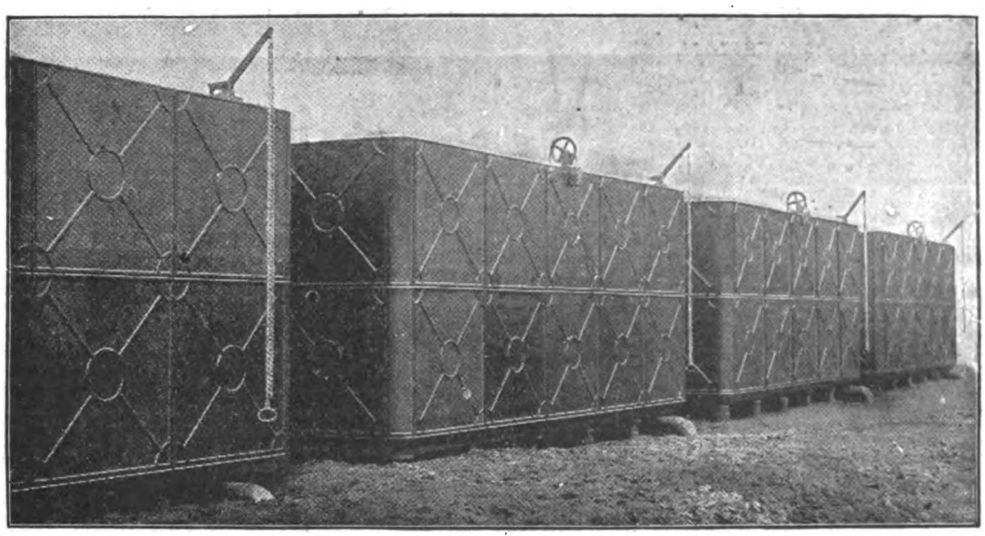
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THE ARCHITECT

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A WEEKLY

ILLUSTRATED JOURNAL

OF

ART,

CIVIL ENGINEERING,

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BUILDING.

Architectura est scientia pluribus disciplinis et variis eruditionibus ornata.—VITRUVIUS.
Quand le bâtiment va, tout va.—PROVERB.

VOL. C.

JULY TO DECEMBER 1918.

LONDON:

PUBLISHED AT IMPERIAL BUILDINGS, LUDGATE CIRCUS, E.C.

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THE ARCHITECT AND CONTRACT REPORTER.
A JOURNAL OF ART, CIVIL ENGINEERING & BUILDING.

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FORTHCOMING EVENTS.

Friday, July 5.

The Architectural Association. Distribution of Prizes in the School of Architecture at 3 P.M. Exhibition of Students' Drawings which will remain on view until July 19.

Saturday, July 6.

Institution of Municipal Engineers, South Eastern Division. Meeting at Wolverton, 11 o'clock. Meet at L. & N. W. Ry. Station, Wolverton, to proceed to Railway Carriage Works for inspection. 12 o'clock, Inspect Various Street Works. 12.30, Cranford Arms Hotel for annual business and luncheon; election of Chairman, Hon. Sec.; and arrange district programme for 1918-19. 2 o'clock, Inspection of Sewage Disposal and Refuse Destructor Works. 3 o'clock, leave for Stony Stratford, arriving 3.15, Inspection of Waterworks Pumping Station and Sewage Disposal Works. All open to any member of Institution. Notification to G. Belson Chilvers, Borough Surveyor, Buckingham, by June 25.

Saturday, July 13.

The Royal Sanitary Institute. Discussion on "Camp Drainage, &c.," by W. H. Beswick, Military Engineer, Larkhill Camp; Town Hall, Swindon, 11 A.M.

St. Paul's Ecclesiological Society. Visit to Merstham and Gatton Churches, conducted by their respective Rectors. Merstham Church, 3.30 P.M.

THE LAND TAXES AND THE BUILDING TRADE.

We approach this subject with no desire to revive old political controversies, but rather in order to advocate a policy which will put the building trade into a position to meet the enormous demand for housing that is now acutely felt, and will be felt still more acutely after the war. Whatever views we hold as to the validity of the theories upon which the policy of the land taxes was justified, we cannot escape from two salient facts which experience of their working has demonstrated. The first fact is that the cost of their collection has been out of all proportion to their yield. The second, and the most important from the point of view of the present position and future prospects of the building trade, is the manner in which they have operated to prevent the flow of capital to building speculation. Under present circumstances these two facts are, it seems to us, decisive. It is clear that the State needs to collect all the money it can get with as much ease and expedition as possible, and that an abundant supply of cheap houses is one of the pressing problems of after-war reconstruction. This is no time for the retention of taxes which bring in no revenue worth considering, and at the same time effectively prevent the application of capital to the solution of the housing problem.

It is no doubt true that, at the time when those taxes were imposed, there was some plausibility in the theories on which they were based. Persons who selfishly held up land which was urgently wanted in developing residential or industrial districts ought to be made to pay for their selfishness. Landowners who found their incomes largely increased, not through any efforts of their own, but merely on account of the growing prosperity of the country as a whole or of the district in which they lived, ought to pay back to the community some of the money which was really its own, because its existence was due to efforts of the community. But, when those theories came to be materialised in the sections of a hotly contested Act of Parliament, when those sections came to be applied to the actual facts of landowning and of the building trade, they hardly worked out quite in the way in which their authors expected. The numbers of selfish owners who were holding up land which was ripe for building was not found to be large; and so the yield of the tax imposed upon them was but small. Special legislation applying to the district in which such land was situate, and directed to its compulsory acquisition, would really have met the situation more cheaply and more adequately. It was found, too, that the number of cases in which the value of the land had largely increased, not by reason of any efforts of the owner, but solely by reason of the growing prosperity of the community, were also small. When the necessary deductions had been made for the expenditure of brains and capital, a comparatively small amount was left upon which the tax could be levied. No doubt in some cases the tax was leviable; but the imposition of the tax in these cases was generally found to be, in substance, a tax, not upon unearned increment, but upon fortunate speculation; and that was a tax to which no other industry was subject. Suppose, for example, a grocer, seeing that a district was likely to grow, set up a grocery business in order to get the trade of this growing district. Suppose his intelligent anticipations were realised, and, owing to the growth of the district, he created a fine business. It might be contended that that business owed its prosperity to the growth of the prosperity of the community quite as much and quite as little as the speculation of a builder who had made money by erecting houses in the same district. Yet the builder was subject to a tax from which the grocer was free.

Now it is quite clear that all this has a very direct bearing upon the capacity of the building trade to meet the future demand for housing. It was proved before the war that people will not put their money into a speculative venture in which the Government, if there

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are profits, may step in and claim a share, while it leaves the speculator to bear the loss, if there are losses. If speculative ventures succeed, whether they are in the building or in any other trade, the speculators pay their income tax, and the Government thereby gets its share. And it is quite clear that the great developments in the graduation of the income tax since the war will effectively prevent landowners and those who speculate in building from making excessive profits at the expense of the community. These developments had not taken place when the land taxes were imposed; and, it seems to us, they render obsolete many of the grounds upon which those taxes were originally justified. At bottom it comes to this—if the housing problem is to be solved we must attract capital to the building trade, not frighten it away. But, whatever our views as to the justice or policy of these taxes, the fact that capital has been frightened away by them from the building trade is undoubted, and must be reckoned with. If the Act which imposes those taxes is repealed, we have very little doubt that capital will begin again to flow to the building trade; and, when that condition has been secured, the housing problem will be more than half solved.

We think that the initiative of individual builders and capitalists, once it is freed from the handicap of these taxes, will be far more likely to solve this problem satisfactorily than any scheme of State provision of houses. It seems to us that the proper function of the State in relation to this problem is, not to turn builder, but to lay down rigid rules as to the sanitary and other conditions upon which houses may be built. This it has in a large measure done by the London and other Building Acts, and the public is protected very adequately by these Acts from the arts of the more unscrupulous builders. If the State will be content with these activities, and if it will repeal the Act which, before the war, had almost stopped the flow of capital to the speculative building trade, we think that that trade will be able to fulfil the demand for housing which the nation will make upon it. If this course is not taken we are quite sure that the prospect of meeting this demand will be very remote.

NOTES AND COMMENTS.

The issue to-day commences our one hundredth volume, and at the end of December we shall have reached our jubilee. But for the war our issue this week would have been a special one, but with the difficulties of paper and printing we have deemed it advisable to leave the question of a special issue to the New Year, hoping that by that time this terrible war may have been determined, or at any rate be able to see some tangible indication that the principles of Justice and Right over the cause of Cruelty and Wrong may be victorious and that we may be speedily returning to our peaceful avocations. We are convinced that architecture and building will have a great future, that after the war the profession and the trade will see a great revival of industry, and we confidently appeal to our readers for a growing spirit of toleration. The war has brought out the best of character, the spirit of sacrifice has been exhibited in a marked manner: may this be sanctified by a spirit of toleration and goodwill, with an earnest endeavour to show that the sacrifices which have been made have not been in vain, but out of the ashes of this world-conflagration arises a united Empire, stronger, more vigorous, more contented, and more united. To this end we shall at all times devote our energies, and we look forward in a hopeful spirit to a vast development in the great industry with which this Journal has always endeavoured to play, we trust, a not unworthy part.

The Australian Premier, speaking at the luncheon given to him by the London Chamber of Commerce on the subject of the coming trade war, had some very severe comments to make upon our lamentable slackness. He asked what had been done in the way of organising our industries and of making preparation for the coming of peace—it was actions which were required, not words. Something had been done to ensure a sufficiency of raw materials for our industries, but not enough. Since he was last with us, no general policy, fiscal or economic, had been declared, no organisation established, no machinery created to deal with the thousand and one problems which would inevitably confront us. This ought to be done without delay, as after the war would be too late, as confusion would then reign complete. We owe it to our country and to the millions of brave men fighting that we shall create such conditions as will ensure them plentiful employment and good wages under decent conditions.

Lord Inchcape, speaking at a meeting of the Imperial Association of Commerce on Wednesday, the 26th ult., pointed out that the business community was suffering from control and interference with its freedom, which was entirely foreign to our nature. There was no desire to in any way impede the Government in the carrying on of the war, but what was going to happen afterwards? This war had led to the creation of innumerable officials throughout the country who, clothed with a little brief authority and the circumlocution that followed, rendered the lives of business men almost unbearable. Sir Edward Carson stated that there would doubtless have to be some kind of control after the war for a time, but he sincerely trusted that, if so, it would be control of business by business men. We only have to look around us in the building trade and to come into contact with official direction to see how disastrous any Government control would be. The official course is by precedent from department to department until no initiative is left, no enterprise forthcoming, in fact, the greater the talents the less opportunity for exhibiting them. The building industries must be released from all control, and that right speedily.

Polling took place on Thursday last week for the election of the two Sheriffs of the City of London. There were four candidates, and our hearty congratulations are tendered to Mr. Banister Flight Fletcher, F.R.I.B.A., who headed the poll. We feel perfectly assured that Mr. Banister Fletcher will most worthily uphold the dignities of his office, and wish him a prosperous and useful year of office.

Mr. Robert Munro, Secretary for Scotland, as President of the Local Government Board for Scotland, has appointed a Women's Committee for the purpose (1) of visiting houses erected recently in Scotland by the Local Government Board on behalf of the Minister of Munitions and the Admiralty, the houses provided by the Scottish National Housing Company at Rosyth, and any other housing schemes selected after consultation with the Board, and to report their views, from the housewife's standpoint, on the planning and arrangements of houses; (2) of submitting recommendations with regard to the planning and arrangements of houses for the working classes; and (3) of reporting on any matter referred to them by the Board. The Committee is constituted as follows:—Mrs. Helen L. Kerr, Edinburgh (member of the Royal Commission on Housing in Scotland), chairman; Miss C. M. Barbour, Grey Lodge, 9 Wellington Street, Dundee; Mrs. C. Blair, Hoprig Mains, Gladsmuir; Mrs. Ferguson, South Elphinston Cottage, Tranent; Mrs. Mary Burns Laird, Glasgow (treasurer of the Scottish Labour Housing Association); Nurse J. P. Watt, Motherwell (superintendent of Motherwell and District Nursing and Ambulance Association); and Mrs. Annie C. L. Wilson, Bellshill (past president of the Bellshill and Mossend Women's Co-operative Guild). Communications on the subject of the Committee's remit should be addressed to Miss E. M. M'Michael, secretary of the Committee, Local Government Board, 125 George Street, Edinburgh.

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ILLUSTRATIONS.

"ARDENRUN PLACE," LINGFIELD, SURREY.

OUR illustrations this week are devoted to the work of Mr. Ernest Newton, A.R.A., the recipient of the Royal Gold Medal for architecture. Further plates will appear in our next issue.

HUY AND NEIGHBOURHOOD.

By JOHN A. RANDOLPH.

MIDWAY between Liège and Namur, in a part of the country formerly replete with monasteries and abbeys, not to mention ancient castles, lies Huy, which we briefly alluded to in the "Call of Belgium."

Its great collegiate church of Notre Dame nestles at the foot of a vast citadel-crowned rock, and is approached by a mediæval stone bridge—locally named the "Pontia"—or rather it was approached till the war when, to the great grief of the inhabitants, it was decided as necessary to blow up the arch at each end, as well as the railway bridge, with a view to hindering the movements of the enemy troops.

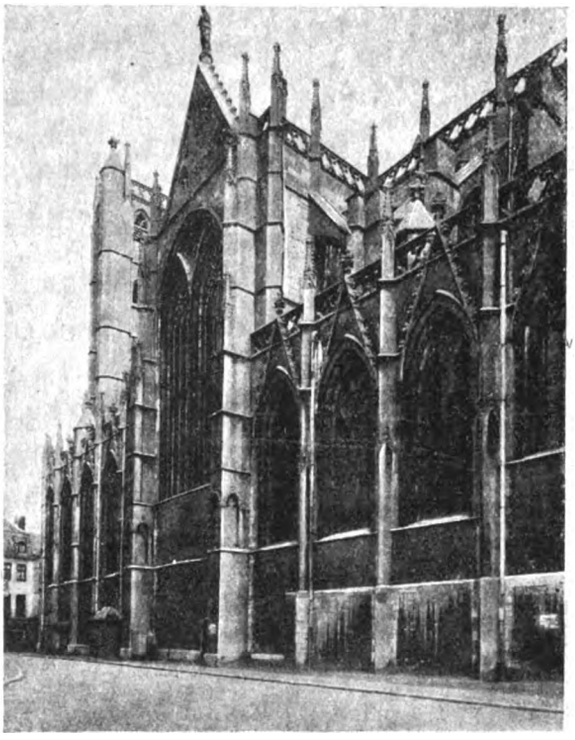
It was at Huy, by the bridge and church, that five Belgian soldiers—of the Garde Civique, it was reported—fired the first shots of the war and killed three Huns from among the forerunners of the invading army lower down the river at Visé, north of Liège, the remainder of the little troop of the enemy retiring hurriedly from the spot—whither was not stated.



HUY.—INTERIOR OF THE COLLEGIATE CHURCH.

On the north side of the church is an open space, giving a fine perspective view of aisle and transept and main entrance to the church at the west end of that aisle. The tympanum of the aisle door has the Crucifixion, and thus is distinguished from the simple doorway to the south aisle reached by the narrow footway through the thirteenth century Bethlehem Porch—so named from the carved subjects over the central opening to the passage—the Adoration of the Shepherds and the Adoration of the Magi, with the Massacre of the Innocents above. There is no west door proper, the tower, a very simple one, having as its chief feature a huge rose window, affectionately regarded by the people, who call it the "Rondia."

The eastern extremities of the choir aisles project a bay beyond the lofty narrow towers, between which rises the great apse that abuts on to the cramped



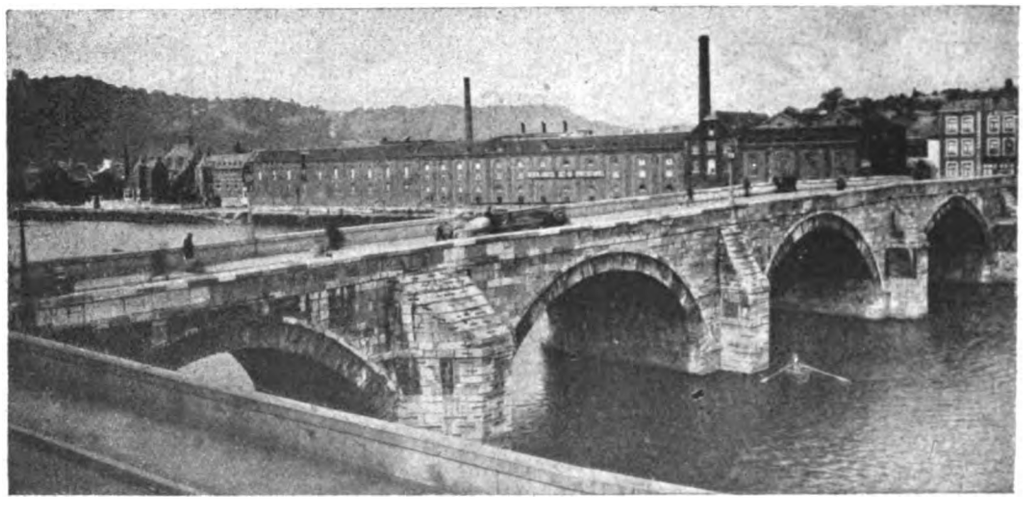
HUY.—NORTH SIDE OF THE CHURCH.

carriage-way leading to the Quai d'Outrebande, on the one hand, and, in five minutes or so, to the south station. The south transept is not gabled—only the north one is. The "Pontia," close to, is a noble structure in stone, and of great width, giving, from the northern side of the river, a wonderful panorama of old Huy and its church and citadel, and, in one direction, the hills on either side of the Hoyoux river, which joins the Meuse by Statte Junction, near the south station on the line to Landen, and in the other along the Meuse towards Amay and Liège. Of Amay more anon.

It is certainly not from the outside that any conception can be got of the vastness of the venerable pile. Indeed, such can only be obtained by reaching the interior through the inner porch, when one is immediately faced by massive grey stone, lofty, cylindrical columns and rich arches, over which is a bold traceried triforium and, above this again, the rich patterned large windows of the clerestory, the whole crowned by an ornately ribbed vaulting whose white ground, contrasting finely with the stone-work, is relieved by Flamboyant multi-coloured foliations and flowers in every space. The uncommon springing of the vault arches will be noticed. The eye follows this splendid arcading and superstructure till it is riveted on an architectural scheme of almost surpassing daring and refinement, in the group of twin-light traceried windows, 90 feet in length, which reach to within a few feet of the choir floor.

The bays of the nave aisles have, under the windows, Romanesque arcading with, superimposed, bold Gothic traceried panelling, and tracery of the same kind is under the "Rondia," inside, where the west door should be. In the north transept is a modern, but supremely excellent, early Gothic-styled Lady altar, with panels filled with carved groups, the whole richly coloured and gilt, the gilding having a metallic surface. It looks a trifle new, but otherwise is in good keeping with the lines of the building. It faces south. The crypt, though

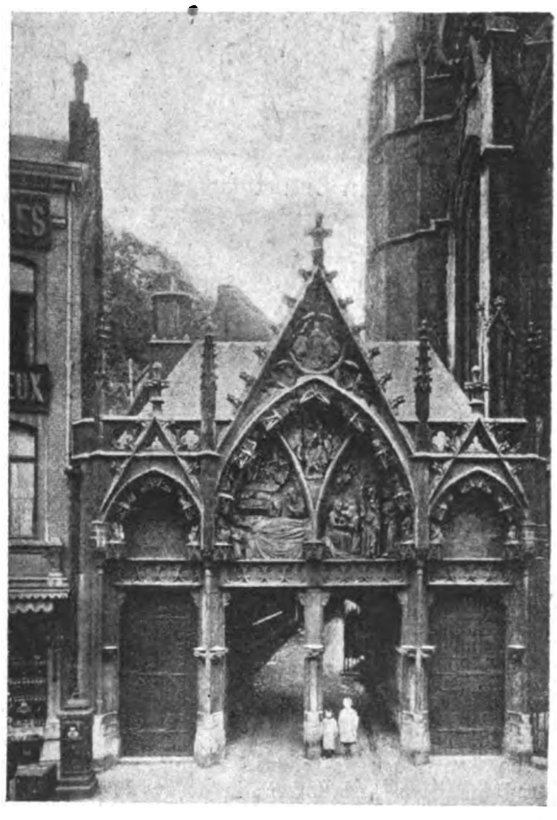
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HUY.—THE BRIDGE, OR "PONTIA."

not large, is of the church erected in 1066, and of great interest, and the Trésor contained, anyhow till the war, many objects of note and value.

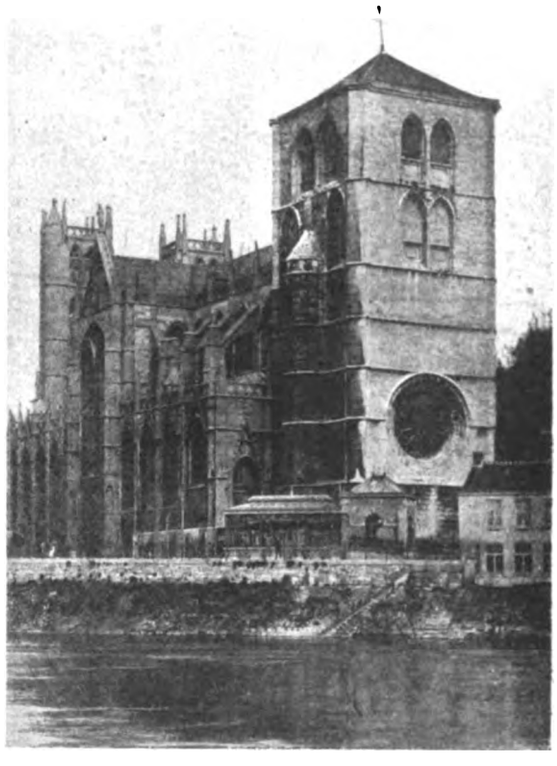
There are two versions of dates given with regard to the church; one is, "first built second century, destroyed in 384, rebuilt in the sixth century, and restored from 1376 to 1536." The other states that the foundation-stone of the collegiate church was laid on March 15, 1311, on the site of one founded in 1066, "of which the crypt has been discovered and disencumbered."



HUY.—BETHLEHEM PORCH.

The Bethlehem Porch dates from the second half of the thirteenth century, and that fact may possibly afford the correct clue to the date of the church, the only traces above ground of the one stated to have been founded in 1066 being the Romanesque arcading of the aisles alluded to above.

Even the over-elaborate, but majestic interior of the church at St. Hubert must take second place to that of



HUY.—NORTH-WEST VIEW OF THE CHURCH, SHOWING THE "RONDIA."

Notre Dame at Huy, both for size and for satisfying effect.

(To be continued.)

MR. J. T. CULLEN, M.R.I.A.I., of 25 Suffolk Street, Dublin, is the architect for the new premises about to be erected for Messrs. Fitzgerald & Co. in Middle Abbey Street; the contractor is Mr. R. Gough, Rutland Place, Dublin.

WE understand that the committee appointed to consider the question of the erection of a memorial to the members and officials of the two Houses of Parliament who have fallen in the war have now presented their report. The designs furnished by Mr. Bertram MacKennal, A.R.A., the Australian sculptor, have been chosen; the site will be under the great window overlooking Westminster Hall. To harmonise with the Gothic surroundings the memorial will be executed in stone.

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THE TOWN-PLANNING INSTITUTE.

MR. E. R. ABBOTT (President) took the chair at the annual meeting of the Institute held at the rooms of the Institution of Municipal and County Engineers, Queen Victoria Street, on June 20.

Mr. G. L. Pepler (hon. sec.) presented the financial statement, which showed a small deficit on the year's working.

On the motion of Mr. E. Willis, the statement was adopted.

On the proposition of Mr. Platt, seconded by Mr. Green (Wolverhampton), the Council was re-elected.

The President reviewed the work of the year, and said they had been labouring under great difficulties. In fact, they had been labouring under difficulties ever since the war started. They all remembered how, in 1913, they had really got the country to show a good deal of enthusiasm on the subject of town planning, but then came the war, which had a very serious effect on the movement. However much they might wish town planning to be taken up by the landowners, one could not but feel that the bulk of the town planning of the country must be done by the local authorities. When, however, they considered the duties which had been cast on local authorities since the war began, they would realise that there had not been much scope for town planning, although, at the same time, a certain amount had been done. Despite the war the Institute had increased its membership by fifteen. They were glad to note the formation of the American City Planning Institute, and were able to furnish the promoters with some notes as to their own experience.

Professor S. D. Adshead proposed a vote of thanks to the President, which was seconded by Mr. Hubbard, and carried.

On the motion of Mr. W. T. Lancashire, seconded by the Chairman, a very hearty vote of thanks was accorded Mr. G. L. Pepler for his work as hon. secretary.

SOME ADMINISTRATIVE PROBLEMS OF TOWN PLANNING.

Mr. Rees Jeffreys, in the course of an address on "Some Administrative Problems," said the greatest obstacle to the adoption of general town planning schemes as distinguished from local schemes was the smallness of the rating unit, the divided interests of County Councils and County Boroughs and the lack of co-operation between adjoining local authorities. Mr. Stilgoe, at the April meeting of the Institute, declared that the scheme of general town planning that had been adopted in Birmingham had only been rendered possible by reason of the fact that Birmingham had absorbed so many of the outside areas. He stated quite frankly that he would not have met with the measure of success that he had obtained if he had had to negotiate with those outside areas as independent authorities and separate financial units. Because London, Glasgow, Leeds, Leicester, and Manchester were not so fortunately circumstanced as Birmingham was the chief reason why Birmingham alone of the big centres had made real progress with general town planning. As it was practically impossible to extend the jurisdiction of the central authorities in London, Glasgow, Leeds, Manchester, and Leicester over the surrounding areas, the problem that had to be discussed and solved was what machinery could be established to secure that measure of unity, both administrative and financial, necessary to enable other large centres of population to follow Birmingham's example. England and Wales, outside London, was divided for purposes of administration into seventy-four county boroughs, sixty-one administrative counties, 251 non-county boroughs, 811 urban district councils, and 666 rural district councils. London was administered by one county council, twenty-eight borough councils, and a city council. These were all rating authorities. The total of 1,893 authorities was the broad division of England and Wales for administrative purposes, but it excluded special authorities, such as dock and harbour boards, water boards, joint committees, and minor authorities like parish councils. The number of authorities was increasing annually by the multiplication of small urban district councils. Many of the existing units of administration were too small for purposes of development, transport, housing, finance and other services. There was no single remedy for this condition of affairs, but some of the more serious evils would be solved by (a) Individual combinations of local authorities. (b) The unification of particular districts for certain services, while retaining the existing authorities for others. (c) Extension of the system of grants in aid, accompanied by Imperial taxation of local resources, so that no existing burden on land and houses, which has already been discounted in market prices, is relieved. But combinations of local authorities would not be secured, and unification of particular districts achieved, if the initiative was left to the local authorities themselves. The Local Government Board had certain powers of initiative, but in view of their judicial functions there were objections to the exercise of these powers. He put forward the following suggestions for consideration:—(1) That there shall be established a "Permanent Commission on the Powers and Boundaries of Local Authorities" associated with, but not controlled by, the Local Government Board. (2) The duties of this Commission shall be to propose (a) Such alterations in the duties, powers and areas of particular local authorities as special local conditions and changed circumstances appear to require; (b) The formation of special authorities for particular districts for certain services. (3) The proposals of the Permanent Commission should be made only after full inquiry and negotiation with all the authorities and interests concerned, and should be embodied in schemes in which the necessary financial adjustments, compensations, &c., have been worked out in detail. The Permanent Commission on Boundaries should take the initiative and not wait until it was approached by any interest or authority before making inquiries and taking steps in the direction of unification (this was all important). The proposals of the Permanent Commission should be embodied in provisional orders, which should be submitted to the Local Government Board. The Local Government Board should have power to confirm orders submitted by the Commissioners, in which case, they would have the effect of an Act of Parliament or submit them to Parliament for Parliamentary confirmation. In the interests of public health, housing and agriculture, it was desirable to spread the urban populations over the surrounding country districts. The motor-'bus was a useful instrument for giving communication between the outside areas and industrial centres. In the public interests, therefore, its development should be encouraged. History had shown the local regulation of traffic passing through the areas of several localities was not in the general public interest. Private capital would not flow into motor-'bus operating companies if they were subjected to varying and harassing restrictions. A local tax on the mileage run by motor-'buses did not provide local authorities with the capital funds they required to reconstruct roads in suitable materials for motor-'bus traffic in advance of such traffic. As compared with a rough macadam road frequently under repair, a modern smooth surface road reduced the running costs of a motor-'bus service. The operating companies and authorities might fairly be asked to make a contribution towards the capital cost of providing such roads, provided they had some voice in the administration of the funds they supplied, and were not called upon to contribute to subsequent cost of maintenance, and their contribution was not used to relieve the annual burden which had previously been borne by the local authority. What private companies and local authorities operating 'buses desired was (a) Freedom from vexatious and varying regulations and charges locally imposed. (b) Freedom from demands for extraordinary traffic damages. (c) Good roads on which their vehicles may run with a minimum of wear and tear. What the local authorities required was the capital funds which would enable them to recon-

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struct the roads before the motor-'bus traffic was placed upon them, so that the subsequent cost of maintenance should not exceed the sums in respect of maintenance previously spent by the responsible authority. The problem was to meet the views of the highway authorities on the one hand, and the companies, persons and authorities operating motor-'buses on the other. The total number of motor-'buses in use in Great Britain in 1916 was 5,342; the highest figure was reached in 1914, when the total number was 6,046. The annual duties payable by motor-'buses to the inland revenue were £3 18*s.* per vehicle. In addition they were also subject to the petrol tax, which was increased on September 22, 1915, from 1½*d.* to 3*d.* per gallon. This might be roughly estimated as equal to £73 per annum per 'bus. Under the Local Government Emergency Provisions Act of 1915, restrictions were placed on the starting of new routes by motor-'buses without the consent of the local authorities. This was a temporary war measure, and, broadly, the effect of the clause had been to prevent new services being started. By private Acts of Parliament powers had been given to the following town councils, Rotherham, Brighton, Hove, Leicester, West Bridgford, West Bromwich, Manchester, and Birkenhead, to run motor-'buses on roads outside their area subject to the consent of the road authorities, and, in the case of Leicester and West Bridgford, to the payment of ¾*d.* per car mile. The principle of a payment per car mile was also established by the Middlesex County Council in the Act for the construction of the Great West Road. That the payment of a mileage rate did not give the local authorities what they really in most cases required, namely, the capital sum to reconstruct the road in suitable materials before the traffic was placed upon it. He put forward the following proposals for consideration:—(1) That a tax of (say) x*d.* per mile run in London and county boroughs, and (say) y*d.* per mile run in the rest of the administrative counties shall be paid by the operating companies and authorities to a central authority. (2) The money so collected shall form a sinking fund to raise a capital sum, which shall be used for the reconstruction of roads on which it is desired to establish motor-'bus routes. (3) That this fund shall be administered by the central authority advised by a committee, upon which highway authorities and motor-'bus operating companies and authorities shall be equally represented. (4) That the central authority thus advised shall select the roads which shall be reconstructed at the expense of the central fund, and until such roads have been reconstructed an intensive motor-'bus service, *i.e.*, more than one motor-'bus per hour each way, shall not be run. (5) Whether a road as at present constructed is capable of sustaining an intensive motor-'bus service shall be decided by the central authority, if the local authority and the local operating company or authority are unable to agree upon this point. (6) That operating companies and authorities paying the mileage rate and running 'buses on reconstructed roads, or on roads as at present constructed with the approval of the local authority or the central authority, shall not be liable to claims for extraordinary traffic damages. The problem before them was whether it was possible to propose a practical scheme to (a) Reconstruct and improve some of the principal roads in Great Britain; (b) Construct new roads required in connection with town planning and housing schemes; and (c) Provide employment for discharged soldiers and munition workers between the period of demobilisation and their re-employment in civil life. The total expenditure on maintenance and improvement of roads, including loan charges, but excluding expenditure out of loans, in England and Wales during the year ended March 31, 1915, was £16,684,000. During the past two years there had been a progressive deterioration of the country's highways owing to the shortage of labour and materials. The supply of road stone available during 1917 did not exceed 50 per cent. of the supply in 1914-15. The quarries and distribution of road stone are now controlled. The reinstatement of their principal roads would be the first concern of the highway authorities after the war. If the war lasts through 1918, the sum required to make good the deterioration and bring the roads back to the pre-war standard would probably not be less than the equivalent of two years' expenditure upon the roads, say £30,000,000, over and above the ordinary expenditure of the first peace year. If the war lasted through 1918 the expenditure to make good deferred maintenance would be proportionately much higher. Deterioration was progressive. But a large mileage of road even before the war was not strong enough to support continuous heavy motor traffic. The Road Board in their memorandum to the Reconstruction Committee, dated January 19, 1917, stated "The total mileage of roads in England and Wales is 152,000. It may be assumed that 10 per cent. of the total, or about 15,000 miles, stand in need, more or less urgent, of reconstruction or strengthening, as distinguished from re-surfacing in the course of ordinary maintenance, in order to enable the roads to carry the growing motor traffic. The cost of reconstruction may be estimated at from £1,000 to £4,000 per mile, or at an average of £2,000 per mile. The total cost of dealing with 15,000 miles may be estimated, therefore, at approximately £30,000,000 over and above the normal expenditure of the local authorities on current and deferred maintenance." There would be a great increase in the heavy motor traffic after the war. He was informed that there were probably 100,000 heavy motor-lorries in military and naval service abroad, many of which must be brought back to be placed upon the roads of this country, and the factories organised for the construction of such lorries would doubtless continue their output and endeavour to find a market for it. An extension of motor-'bus services in connection with housing schemes and to supplement the services of the deteriorated railways might also be expected. A water-bound macadam road would not support any considerable volume of motor traffic; a water-bound macadam road tar sprayed would support a considerable traffic of private motor vehicles and a limited number of heavy motor vehicles, but for any considerable volume of heavy motor traffic stronger types of road would need to be provided. Many of the bridges of this country, especially those over railways and canals, would not carry fully-loaded heavy motor vehicles. These would need reconstruction and strengthening in many cases. The Road Board, in their memorandum to the Reconstruction Committee, estimated "that the expenditure necessary to reconstruct bridges on important roads so as to support the motor traffic legalised by Parliament will not be less than £7,000,000." The roads of England and Wales were vested in nearly 2,000 local authorities. A continuous length of twenty miles of important road might be in the hands of three, four or even as many as ten independent authorities. Their organisation and financial resources, generally speaking, were unequal to any general scheme of improvement. It might be necessary, therefore, to provide from some central source both the money and the organisation to deal with special work. Under Brig.-General Maybury there had been established in France a successful organisation for constructing and repairing roads, which was officered by some of the most capable engineers, road foremen and road workmen of Great Britain. A road organisation had also been established in England by the Road Board for dealing with work on private and public roads required by the War Office, the Ministry of Munitions, the Admiralty and the Board of Trade. Both the French and English organisations had acquired plant for the purposes of their work. He suggested (1) that the classification of roads into three classes be completed and the scheme recommended by the Treasury Departmental Committee on Taxation and embodied in the then Government's Finance Bill (251 of 1914) be carried into law. This scheme provided for a Government grant to highway authorities of 50 per cent. of the cost of main-

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taining first-class roads, and 25 per cent. of the cost of second-class roads. (2) That sufficient of the War Road Organisation which has been created in France and England be formed into a temporary organisation on a civil and voluntary basis to assist the local authorities in the work of reconstructing the 15,000 miles of road and the several hundred weak bridges, and any other special works such as new roads required in connection with housing schemes and industrial developments. The highway authorities with their ordinary staffs to deal with (1) current maintenance and (2) making good deferred maintenance. (3) That the Temporary Road Organisation, with its backbone of municipal engineers, foremen and skilled roadmen, shall be utilised to give useful and distributed employment to many thousands of soldiers and munition workers in the intervening period between the time that they are no longer required as soldiers and munition workers and the time that they are absorbed in civil employment. (4) That the Temporary Road Organisation continue to use its road and quarrying plant acquired during the war and as many thousands of ex-military lorries as it usefully can employ. (5) That the Temporary Road Organisation shall undertake the distribution of road materials not only for the reconstruction of the fifteen thousand miles of road on which it is specially employed, but for all the highway authorities in England and Wales which desire its assistance. (6) A five-year programme for the Temporary Organisation to be settled, involving a total expenditure of, say, £54,000,000. The work might be spread over five years, as follows:—In the first year, twenty millions; in the second year, thirteen and a quarter millions; in the third year, nine and a quarter millions; in the fourth year, six and a quarter millions; and in the fifth year five and a quarter millions; the Temporary Road Organisation being gradually reduced each year as its work is completed. At the end of the fifth year it could be disbanded, having placed the local authorities in possession of 15,000 miles of reconstructed roads and several hundred strengthened bridges. (7) The 15,000 miles of road to be reconstructed would be settled by conferences between the Temporary Road Organisation and the local authorities, and the order in which particular lengths shall be dealt with determined by the order of their importance. When the reconstruction of a particular length has been completed by the Temporary Organisation, the local authority would be responsible for its future maintenance. (8) The special works of road reconstruction, new bridges and new roads will be undertaken by the Temporary Road Organisation in such a way as not to interfere with the road organisations of the local authorities, which would carry out their ordinary programme of repairs and renewals with their own staffs in the ordinary way, save that they would have the assistance of the Temporary Road Organisation in the matter of supplies.

On the assumption that peace was declared at the beginning of 1919, the financial position as it would exist in 1919-20 will be as follows:—One year's expenditure on maintenance, ordinary improvements, and loan charges, as in 1914-15, £16,684,000; add 20 per cent. for increased cost of labour and material, £3,336,800; total, £20,120,800; add deferred maintenance, 1915-19, £30,000,000; total expenditure to be provided to restore roads to pre-war conditions, £50,120,800. Deducting the amount which some authorities have accumulated and invested in Treasury bills, &c., as a sum to be used in making good the roads after the war, say, as a guess, £7,000,000, it left £43,120,000 to be paid. Supposing that the money be found by the local authorities with the assistance of short loans, so that the total annual expenditure for which the local authorities would be responsible would for the five years immediately following the war average not more than £24,000,000. This, it was assumed, would be the maximum burden that the local authorities would carry, even if they would carry so much. The sum which would need to be found from other sources will be (a) Cost of reconstruction of 15,000 miles of road, including 2,000 for motor-'bus traffic, £33,000,000; (b) Cost of reconstruction and improvement of bridges, £7,000,000; (c) New roads, bridges and improvements in connection with housing and town-planning schemes, an indefinite amount. No estimate was made for costly urban widenings involving the purchase of buildings, as it is assumed that all such improvements must for financial reasons be postponed for many years.

(To be concluded.)

TRADE PARLIAMENTS AND THEIR WORK.

By ERNEST J. P. BENN, Chairman Industrial Reconstruction Council.

XI.—*The Position of Labour.*

IN concluding these articles a word or two further should be said about the position of Labour. Such opposition as exists to the Whitley Report comes from two parties who are the very last that one would expect to find associated in anything. The Whitley Report recommends that Joint Standing Industrial Councils should be composed of equal numbers of representatives of employers' associations and trade unions, and that these councils should form the basis of a complete system of self-government. The principle of the right of Labour to participate in trade questions which affect the welfare of a whole industry is accepted by moderate opinion on both sides, but the reactionary type of employer who still thinks of the world as it was in 1914 is inclined to criticise. This man still fails to see that Labour has any interests in such subjects as raw materials or markets, and he fondly imagines that he will secure the co-operation of Labour and the abolition of restriction of output while keeping Labour leaders in ignorance as to the state of trade generally. On the other hand we get the most forward type of Socialist, the syndicalist and guildsman, who dreams of a world from which capital is abolished and declines to have anything to do with Joint Standing Industrial Councils on the ground that they are an attempt to perpetuate and bolster up what he is pleased to call the capitalistic system. Needless to say, neither class must be allowed to prevail. I need not bother here to answer the syndicalist who wants to abolish capital, but I may perchance catch the eye and ear of some employer who has so far failed to grasp the true inwardness of Labour's present demand for a share in the control of industry. There is no suggestion here that Labour should have any say in the control of the individual actions of an individual employer. The employer who has all the risk must be the final judge as to what he shall buy and what he shall sell and at what prices he will complete either transaction; but in our conception of industry we have got far beyond the point when it is regarded as a matter merely of buying or selling by an individual. We have reached the stage when we can see that the welfare of each industry is a matter of vital importance to the nation, also we now realise that all those engaged in that industry—capitalists, managers, workpeople, travellers, shopkeepers, clerks, and others—have a right to know that the industry as a whole is sound and prosperous and is likely to provide them with a means of living in return for the study and attention that they are prepared to give to it. If, for instance, as has happened in many trades, our export business has not received the attention it deserves; if there are markets which have never been exploited and demands that have never been satisfied, then Labour is entitled to look into these questions before it will give an answer to the request that will presently be made to do its best to increase production. If, on the other hand, materials are short, machinery non-existent, and capital unobtainable or credit scarce, and, in consequence it is necessary to ask Labour to go on to half-time, Labour will not, in future, accept the mere statement of that position from an autocratic body of employers; it will demand the right to go into the circum-

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stances for itself and satisfy itself that things are really so. But apart altogether from the right of Labour to share in the discussion of what may be called general trade politics, there is every advantage to be gained from such partnership. Every trade in the future will find itself in the position of wanting something from the Government. It may want materials, it may want a tariff, it may want something to be done, and is much more likely to want something not to be done. It is perfectly obvious that if these demands upon the Government are made by a joint body, composed of employers and employed, they are bound to receive more attention than would be the case if they came from one section only.

Next, and last, if the new conception of industry is accepted, if we get both masters and men to look upon their calling as a branch of national service, we find for the first time the opportunity of establishing between both parties that confidence the absence of which has been the cause of most of our industrial trouble in the past. It is only the small man that fears from any of these developments some damage to his own personal position. The larger conception knows that the individual interest is, after all, only part of a wider interest, and that the promotion of the latter is the true way to benefit the former. The idea of the control of industry by Joint Standing Industrial Councils is, after all, nothing but a natural development following upon the rise within the last couple of generations of the trade associations and the trade unions.

In conclusion let me repeat a few of the sentences which sum up the whole of this great question. The betterment and development of our trade for the benefit of all those engaged in it and for the nation as a whole; development, trade by trade, one trade at a time, the trade being the unit; each trade as a branch of national service; each trade as a vital part of the social organism; the abolition of jealousy and secrecy and all that is born of ignorance and small-mindedness; production as the source of all prosperity; waste of material, or method, or of goods, or of effort as a crime against the community. When these ideas begin to be generally understood and applied we shall all be able to afford to smile at the old days when we squabbled for the wages and profits which were insignificant beside what is thus made possible. There is far more for everybody in each of our trades than has ever yet been got out of them, and if Labour and Capital will join hands in this new voyage of discovery the prospects of the future are indeed bright.

ARCHITECT'S CLAIM FOR FEES.

A CLAIM by an architect for fees for making plans of proposed alterations and additions to Enton Lodge, Witley, Surrey, came before Mr. Justice Rowlatt in the King's Bench Division on June 26. The plaintiff was Mr. William Douglas Caröe, of Vann, Hambledon, Surrey, and the action was brought against Mr. John Edmund Eastwood, of Gosden House, Shalford, Surrey. There was a counter-claim by the defendant.

Plaintiff gave evidence as to the preparation of the plans on instructions received from the defendant.

In cross-examination by Mr. Maddocks, who appeared on behalf of the defendant, witness denied that during the time he was completing the plans defendant was constantly pressing witness to let him know the amount the work was likely to cost. Witness told him that until he had completed the plans he was not prepared to give an estimate, but he was doing the work on as economical a scale as possible.

Defendant alleged that the plaintiff was employed on the express condition that the total cost of the work should not exceed £5,000, and the plans prepared could not be carried out for that amount, and were, therefore, quite useless, and were never used.

In his evidence, Mr. Eastwood said he explained to Mr. Caröe that he wanted to enlarge the house and to have the work done as economically as possible. Witness mentioned the sum of £4,000 to £5,000. He was pleased with the plaintiff's designs, but the price went far beyond the amount stated.

In cross-examination by Mr. Hughes, K.C., the defendant admitted that in October, 1913, he was willing to go to £6,000. In June, 1914, he would have gone on with the work, if it could have been done as originally agreed, but the matter was not carried through by the time the war began, and he had since sold the property. He sold the house last Michaelmas, and the price obtained was quite satisfactory.

Mr. Maddocks addressed his lordship on behalf of the defendant, and said there seemed to be a common notion amongst architects that when they were called in to prepare plans, even though they did not keep within the limits discussed at the meeting with their clients, still they were entitled to recover for the work they had done. That was not the legal aspect.

His lordship intimated that he would not trouble Mr. Hughes to address him on behalf of the plaintiff.

Giving judgment, Mr. Justice Rowlatt said that Mr. Eastwood was the proprietor of a house of considerable antiquity and of some attractiveness in a beautiful part of Surrey. The house stood on a sloping piece of land, and at a considerable distance from it there stood some old barns which were capable no doubt of supplying the shell of a very attractive spacious room or hall, a billiard room, a music room or any big room of that kind attached to a rather luxurious country house. Mr. Eastwood thought it would be a good plan to so enlarge the house as to make it reach out to the barn and join up in one residence. Now it was quite obvious that a scheme of that sort was not an everyday scheme at all. They had got the uniting of the two buildings; they had got the intervening space to be dealt with in some way; and they had got a pronounced slope to deal with. Altogether it was undoubtedly a job of very considerable complication. In the circumstances, Mr. Eastwood employed Mr. Caröe. Of course, an architect was paid by percentage on the estimated cost of the work, and it was a commonplace to make the observation that the more expensive he could make it the more he was paid, but no professional man of any standing could afford to exploit his clients. He must be reasonable. At the same time no man in the position of an architect—he was speaking of a case such as the present one where artistic considerations and circumstances of difficulty had to be dealt with—could afford to disgust his client by putting before him wretched cheap designs which would make a poor show, and cause the client misery for the rest of his life. Usually when a man wanted to build a house and employed an architect, there were various discussions conducted, some before lunch, others after lunch, some when the parties were feeling warm, and sanguine, and expansive, others when they were cold, anæmic, and shrinking, and the plans went up and down. That was what happened: and as a rule, the architect prepared plans which probably exceeded what his client thought of in the first instance, and very often his client ran to the extra expense rather than spoil his opportunities by cheap work. But in any case the architect came upon the scene as one who had got to handle the situation practically from the point of view of doing something which would please his client. It was a poor architect, really, that did not show his client the capacities of the job. An architect must not go and design things that were out of all reason, and out of all contemplation, but he had a certain amount of latitude. His lordship referred to the discussion which took place between Mr. Eastwood and Mr. Caröe on February 8, 1913. Mr. Eastwood said that £4,000 to £5,000 was the limit, but he had in his own mind £6,000, which certainly indicated to him (the judge) that the limit was not put forward as a hard and fast rule. He thought the position taken up by Mr. Eastwood when he received the plans was that they were very nice, but rather expensive, but he did not think when Mr. East-

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wood received the plans he thought there had been any breach of contract on Mr. Caröe's part. Perhaps Mr. Caröe had been a little enthusiastic. Of course, architects were artistically-minded people, they would not be much good if they weren't. If Mr. Caröe had charged 3½ per cent. on £7,500 he did not think he should have given it to him. Mr. Caröe had charged percentage on £6,000, and he thought, having regard to all the circumstances of the case, he certainly had done work for which Mr. Eastwood must pay. Mr. Caröe had charged some 200 guineas, and he (the judge) thought that was a fair fee for what he had done. Nobody liked paying architect's fees when they had not got the house, it was the most painful process imaginable. He sympathised with Mr. Eastwood and was sorry there had been a misunderstanding between two estimable gentlemen, but he could only come to the conclusion that Mr. Caröe was entitled to his money, and must have judgment for the sum claimed and he must have costs, but he must pay costs, if there were any, in respect of the causes of action which he had discontinued.

Mr. Hughes: The counter-claim has been dismissed.

His lordship: Yes.

THE METRIC SYSTEM IN ITS RELATION TO THE SURVEYORS' PROFESSION.*

By Lieut. A. J. MARTIN (Fellow).

PROPOSED REFORM OF OUR MEASURES AND WEIGHTS.

THE use by our commercial rivals of calculating machines and slide rules based on logarithmic tables has for many years given them a great and growing advantage over us in factories, in the office, on the farm, and elsewhere.

It is impossible for us to use these rapid businesslike methods for multiplying unless instead of a conglomeration of measures and weights we have a "system" of measures and weights (i.) with a common radix—or regular system of multiples and submultiples between the units—throughout, and (ii.) in which the measures and weights are inter-related.

Let us first consider the question of a radix.

The binary system (Latin, *bini*, two by two) is a system based on the convenience of doubling or halving any quantity. Tribes in Central Africa have been found which count on a radix or basis of 2 instead of 10. But an advance on this is to adopt a radix of 8 as a convenient basis; thus, multiples of 2, 4, 8, 16, 32, &c., and submultiples of ½, ¼, ⅛, 1/16, 1/32, 1/64, 1/128, &c. This system is well illustrated in our measures of capacity, namely, three distinct denominations called quartern (or gill), quart (of milk, for example), and quarter (of wheat); a one-pound loaf, too, was the quarter of a quartern loaf. We also get denominations of 640, 16, and so on.

The duodecimal system is based on a radix of 12. There is much to say for the number 12, as it can be divided by 3 and its double, though not by 5. On the other hand, the fact that mankind has learnt to count in tens and not twelves has always proved insurmountable, and will probably continue to do so for at least 1 *t*, *ttt* years, as a duodecimalist would write it. The proposal of the duodecimalists means that we should have two new symbols for 10 and 11, e.g., the initial letters "t" and "e," and that the symbols for 12 should in future be 10—meaning one complete set with nothing added after it. New names would be required for 10 and all subsequent numbers; 5 × 4 would be called 1-don-8, and in symbols would be 18, and so on. We cannot wait until all mankind, all our customers, have agreed to adopt a different system of counting, but must put our house in order straight away, in readiness for the world-wide commercial conflict which is about to break out. Our lessons in the last three years should have taught us that in all warfare we must have up-to-date weapons.

When we have discussed the inter-relationship of measures and weights, I think it will be clear to all that if man had had 12 fingers and 12 toes, and had thus learned to adopt a radix of 12, either his primary standards of measures and weights would have been unhandy, or else their duodecimal multiples and submultiples would have been inconvenient and unworkable. If any one doubts this, let him try and put down in black and white what primary and secondary standards he suggests, together with equivalents in imperial and international measures and weights, and state how long he thinks it would be before we could adopt such a system of counting for ourselves and our customers.

The Decimal System.—The whole civilised world has adopted a radix of 10, that is to say, it counts and calculates in tens, hundreds, thousands, &c., and most of mankind has adopted some system or other of measures and weights, also coinage, based on this system of counting. The principal objection to this system is that although 10 can be divided by 5 it cannot be divided by 3.

On the general question of a radix a little thought tells us it must be either 8, 10, or 12, and it seems obvious to me that further thought and study will reveal the fact that we were not created the wrong way, but that the number 10 is the happy medium and a compromise.

PAST SYSTEMS AND OUR PRESENT TANGLE.

Before any reform is suggested it is necessary to examine our past system and our present collection of units of measures and weights, for we now have no "system." Probably most of the measures and weights which are in use throughout the British Isles had a genesis common with those of other European nations, but from a number of circumstances differences arose, and when once this happened, intercommunication in the country being bad, the differences became accentuated. Even locally the measures became corrupted, so that there were, for example, three different gallons for ale, wine, and beer, to say nothing of the many different sized acres.

Mention of these facts is important, as I want everyone to disabuse himself of the idea that exceptions should be made specially and permanently for this or that trade or profession, for landed proprietors, and so on. It is the exceptions and local customs, which were allowed to grow up in the past, that have brought us to our present muddle.

As our race developed into a homogeneous body, units were introduced corresponding, as nearly as possible, with the average of local denominations, but in this process we lost nearly all traces of a regular system of multiples between the units. Thus the decimal gradations of the old English mile (Latin, mille, a thousand) and of the bushel were lost, and the hundredweight has become the one hundred and twelve weight. Further, the measures of extension, weight, and capacity entirely lost their inter-relationship.

Reforms eventually followed this chaos. Between the years 1215 and 1800 either the yard, pound, gallon, or bushel were altered in eighty-three different Acts of Parliament. It is quite erroneous, therefore, to think that our measures and weights, as we have them to-day, have come down to us without change from time immemorial; they are in fact comparatively modern, many of our present units not being a century old.

The first great step towards the recovery of a better past was made in 1824, when the imperial gallon was altered so as to make it equal to 10 avoirdupois pounds' weight of water, and that is the only inter-relationship we have between our weights and the measures of capacity.

But we have only had patchwork reforms, and to-day, instead of a common radix, we have the following unscientific and unbusinesslike gradations in our legal "tables":—

12—3, 5¼, 40, 8; 1,760; 7.92, 100, 80.
144—9, 30¼, 40, 4, 640; 100,000.
1,728—27.
7,000—16, 16, 14, 2, 4, 112, 20.
2—4, 2, 4, 8, 36, 9⅜.

* Abstract of Paper read at the ordinary general meeting of the Surveyors' Institution held on May 6.

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It will be seen that our measures and weights have not only no radix, but there is no guiding principle nor "system" in them. If anyone doubts how cumbersome the above gradations are, let him for one moment imagine any one of the sets introduced into our money tables.

Added to the confusion we have "heaped" measure and other local customary measures and weights, which, as such, are illegal, and yet books of tables perpetuating illegalities are allowed to be published, and children are taught what they can afterwards be punished for using.

The imperial measures and weights are used with frequent modifications in the Oversea Dominions. Thus in some our obsolete troy pound is still the primary standard instead of the avoirdupois pound; and land measures frequently differ from the imperial and surveyor's special measures. These modifications and differences will have a tendency to increase until such time as we adopt a system, or the Empire on this question breaks apart.

Then there is India with her numerous peculiarities, local and trade customs, and these, speaking generally, are a curse to the great masses of the people.

Reference should also be made to the United States of America, as from their experience we can learn that the time has passed when every State can be a law unto itself on this question. It being realised that a decimal system was preferable, some States in the Union decimalised on the mile, some on the yard, and so on. The results were not satisfactory as the various units were not decimally related, and, apart from the differences between the various States, they diverged from such natural constants as the horse-load or ton and handy or primary units.

I submit that with all the confusion in our own collection of measures and weights, with our local customs (particularly as to selling our staple food, corn), with illegal "tables" on sale, with differences in practice between ourselves, the Oversea Dominions and India, the United States of America, and other countries which may become embodied in the Empire, the possibility of adopting a modern system throughout the whole Empire and Anglo-Saxon speaking world, for all trades and all professions, may seem hopeless to the weak-hearted.

But I will endeavour to demonstrate that the difficulty is not so great as at first sight it appears. To begin with, if we make a change the British world has through its Chamber of Commerce, &c., promised to follow suit. All we have to consider, therefore, is the legal units in and for the British Isles.

The question simplifies itself still further when we realise that the British primary standards are as follows: (Weights and Measures Act, 1878, secs. 10 to 15:—

Lineal	The Yard.
Weight	The Pound.*
Capacity	The Gallon.

All our other denominations are multiples or sub-multiples of these (Weights and Measures Act, 1878, secs. 10 to 17), and it is essential to remember what these primary standards are. No one should think, for example, that our standard of length is either the mile or the inch, or that our standard weight is either the grain or the ton. Such extremes are too unhandy for scientific accuracy to be primary standards.

I will not trouble you with how the yard, pound and gallon are supposed to have become less than the average corresponding units of the French before that nation unified its measures and weights; but we can trace that the old Scotch and Irish pounds, and the old Scotch and Irish acres, for example, were larger than the corresponding English units, and in fact corresponded closely with French units; and we know that we had to increase our hundredweight from 100 lb. to 112 lb., and our rod from 5 yards to 5½ yards, the last increase being because the old English, the Scotch and Irish yards were all longer than our present yard. It is a pity that at the Act of Union we did not adopt the Scottish pound; if we had we should probably have adopted the metric system long ago.

When the French decided to replace their local measures and weights by standards for their whole country, they decided after careful study on the following essentials for any new system of measures and weights:—

(1) That their new units should be such as to give approximations to the average of their local units and to those of other European countries.

(2) That these should be so adjusted that the measures of length, weight and capacity should be inter-related throughout;

(3) Necessitated by (2), that there should be a common radix throughout;

(4) That natural constants such as the ton or horse-load could not be abandoned, but might be slightly adjusted.

At the suggestion of an Englishman, James Watt, the French adopted the radix of 10, and then, so as to make their measures of length, weight and capacity interdependent, they doubled their approximations to our pound and gallon. We may therefore expect that their new standards have some approximation, some affinity, to our yard, double-pound and double-gallon. Briefly, we find this: If we increased our yard, double-pound and double-gallon approximately 10 per cent. we could have international units.

I have now come to a crucial point. It may be asked, If our present primary units are approximately 10 per cent. less than those of the International system, why could not we subject them to slight adjustment so as to make them exactly 10 per cent. less than units of the International system, and thus have a decimal system of inter-related measures and weights of our own, and yet easy of comparison with the International system?

The answer is simple, namely, that if our yard were made exactly 10 per cent. shorter than the meter—that is to say, 9-10ths of the meter—the square yard would be 9-10ths of 9-10ths of a square meter, or 81-100ths of a square meter, and the cubic yard would be 729-1,000ths of a cubic meter. It is clear, therefore, that not only our square or cubic measures would have an awkward relationship with the International units, but that all the weights and measures of capacity, if derived from the cubic measures, could not be 10 per cent. less than the International, but would be less than three-fourths of the nearest International denominations. One ton and one pound, for example, would be considerably less than three-fourths of our present ton and pound. Our foreign customers admit our goods are best, but they are not prepared to accept three-fourths the quantity which other countries supply.

I have tried to show that, for commercial and other reasons, we should abandon our present confusion of measures and weights and have a system based on a common radix; that that radix should be 10; that our measures and weights must be inter-related; that if we use one of our present standards from which to derive the others we shall still not be in line with the rest of the world; and that it is mathematically impossible to make all our primary units exactly 10 per cent. less than the International if they are to be inter-related.

We may continue to search as Germany did, and experiment to see if we cannot found a system of our own surpassing the International system if possible; but, experiment how one will, everyone must start on the same principles—the essentials mentioned above—with

* Namely, the avoirdupois pound. *There has been no standard troy pound since the destruction of the standard by the fire at the Houses of Parliament in 1834, and the standard was formally abolished by the Weights and Measures Act of 1855, being replaced by avoirdupois weight from which the troy "ounce" and its decimal multiples and sub-multip'es are now derived (Weights and Measures Act, 1878, secs. 14 and 20). How troy weight might be allowed to die a natural death is set out in Appendix V. (B). Apothecaries' measures and weights are now replaced in the British Pharmacopœia by the International.

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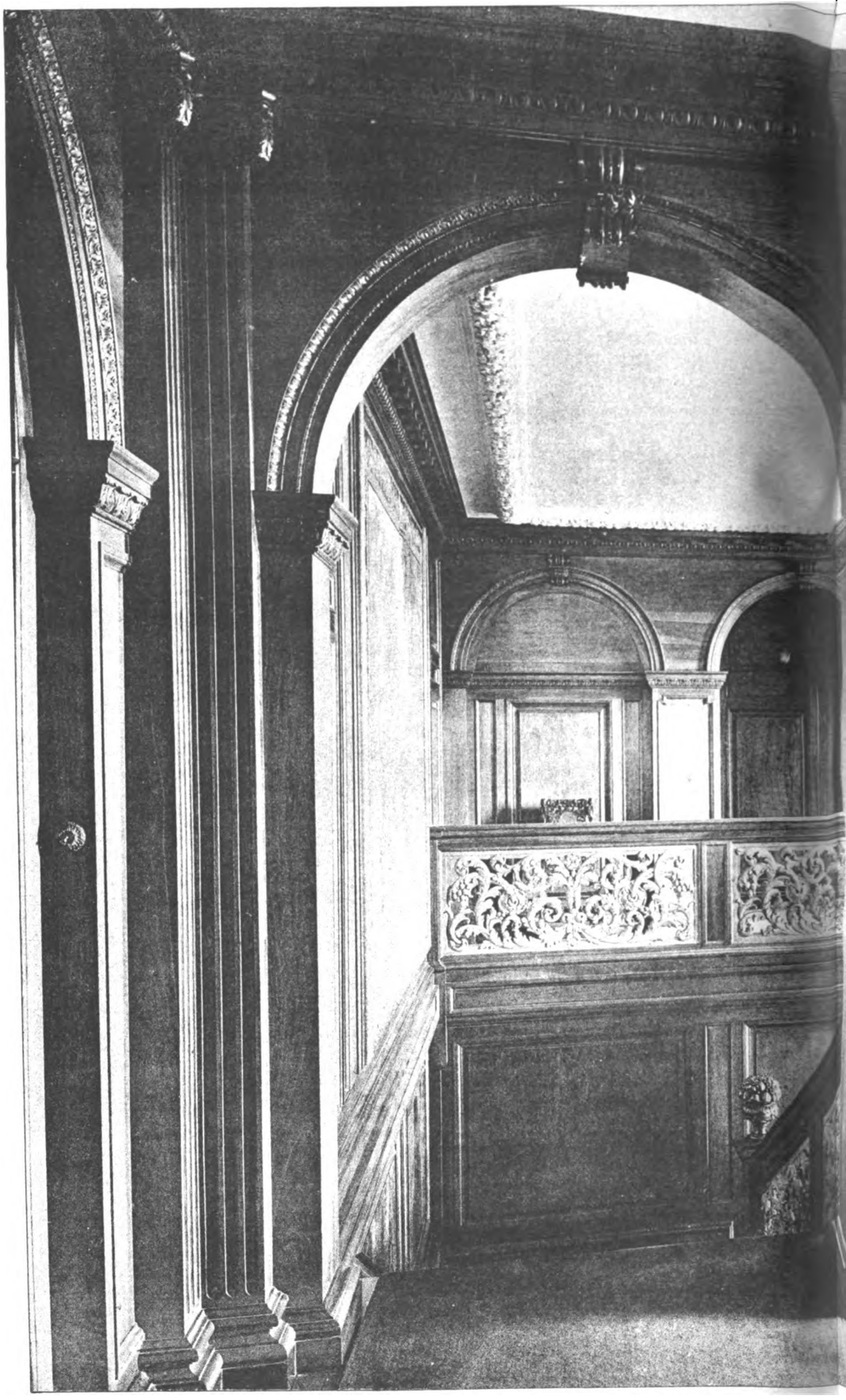
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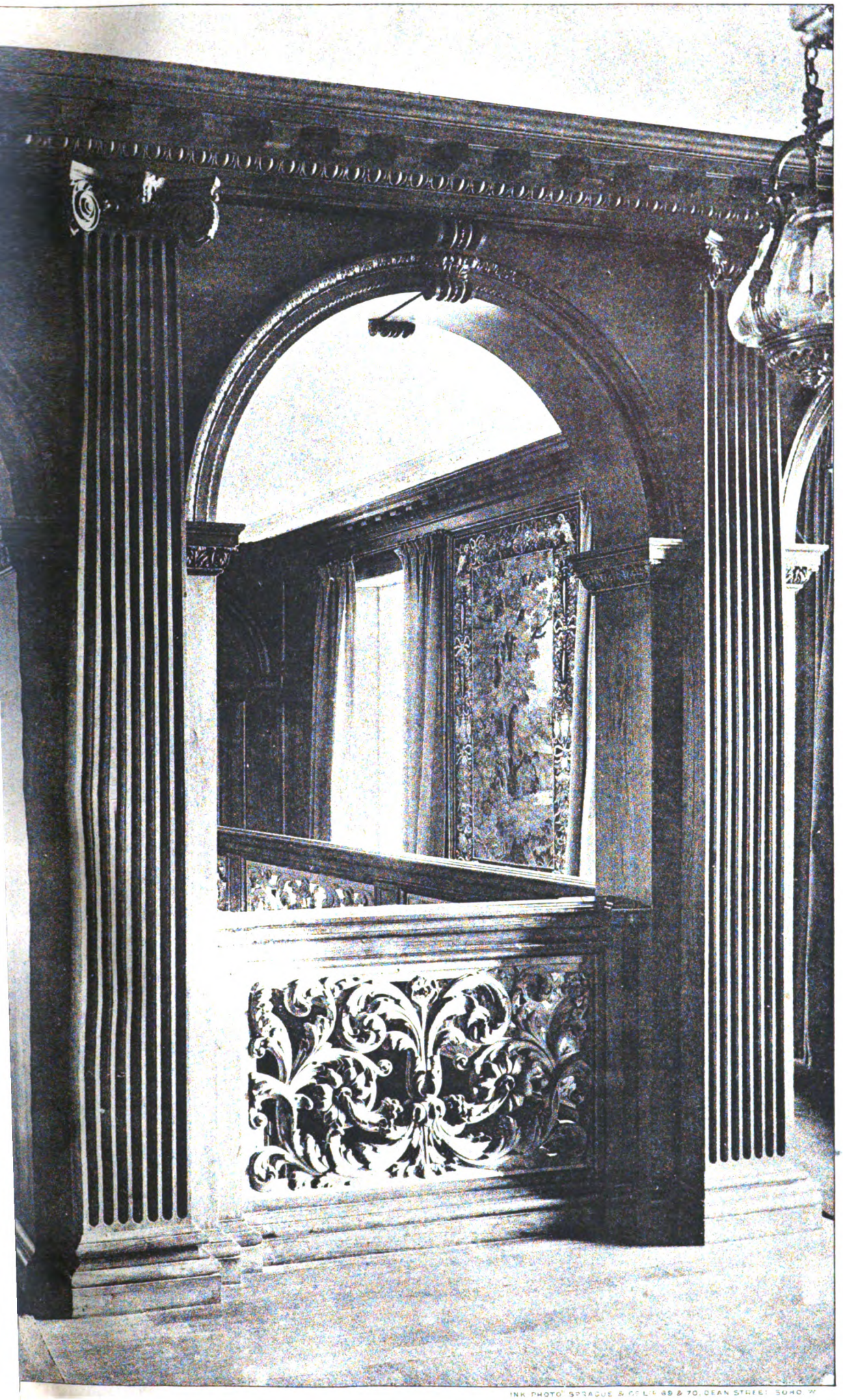
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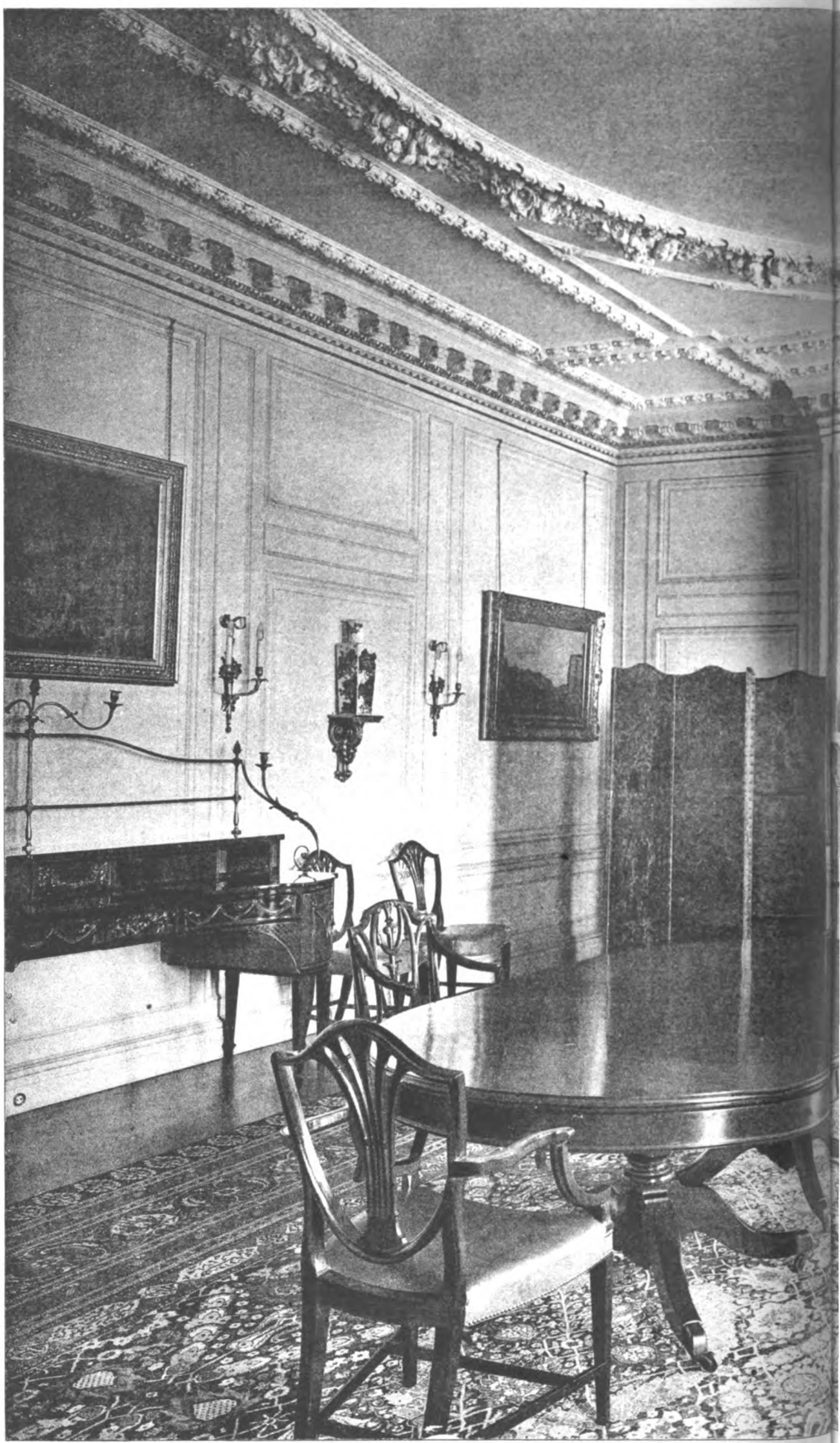
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URREY. DINING ROOM.
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which the French started their work. The Germans speedily came to a decision and acted thereon. Although the memories of 1870 were so recent they adopted the system (not the coinage) of their enemy, and since then many other nations have done the same. As a result the metric system has now become International, and those nations who have adopted it have felt the benefit in their international trade relations.

I submit that it behoves us, especially in these times, to stop looking about, but to examine the International system and realise how easily one can work with it. We shall then see if it is possible for us to adopt it in our profession, if it is adopted generally in the country. It should be remembered that the system is already permissive in Great Britain, but it is seldom that an individual can use it by himself any more than anyone could alone start using a brand-new system. It is for the Government to act.*

HOUSING OF THE FUTURE.

LIEUT. FRANK WINDSOR, of Croydon, writes to the "Croydon Advertiser" on the question of home-planning. He states the all-important factor is the plan or disposition of the rooms, making them convenient and readily applicable to their various occupations. A woman has a great knowledge of the general requirements of a house, as she it is who puts the apartments to their final test and obtains fullest benefit, but certain things govern the character of the building and what will suit one person is not considered satisfactory by another.

The structure is referred to as a six roomed house. This practically governs the whole scheme, or at least fixes a datum for argument.

If you require six rooms, each of stated size, then a slight calculation is only necessary to get cubic contents and the price becomes a known quantity. This at once fixes the cost of rent and general upkeep. But if you carry on further and build a five or six roomed building and then attach sundry extensions, the cost is increased and also the labour or upkeep. For instance, "kitchen scullery" is mentioned in one paragraph as the "workshop," but in another line "no steps are required between kitchen and scullery." In the first case this is one room and in the other two. Naturally, cost comes into consideration.

Again, "a side way," if possible covered in as open air sleeping space (a very good idea); also a porch "back and front," the back one if possible large enough to shelter the family. These additions would at least add cost of one room or reduce your six roomed house to five.

"All windows to open inwards." A very much argued question by clients and architects. It no doubt gives advantages, especially in windows above the ground level, but difficulties arise. "Dressing," "weather proofing," "convenience" in the room, occupation of space (which must be curtailed when coming inwards), and also proper ventilation. Reversible or special windows are made to overcome these difficulties, which adds to the cost of the original article.

The dresser. A much misused article generally. Both open and closed have peculiarities. Glass or wood doors get broken, and the cost of sashes is great. Portions closed in away from view often harbour more dust than one which is seen and easily accessible to sweep down and dust.

Floors polished. This should mean hard wood and is at times dangerous to children, especially with nailed boots; and they are generally speaking cold.

Bath room and lavatory upstairs. Another vexed question that has had a lot of consideration and varying opinions. In a small house steam and noise are difficult problems. And again, cost. If on the floor above ground level additional piping, both supply and waste, is necessary. Two lavatories are required to each house (one in the garden).

"No kitchen range" means hot water circulating, gas system or a geyser, all of which require the most careful consideration in regard to position in the house and the persons who use them.

In these times the greatest importance must be placed on materials of construction, and whether the fabric is of one material or another will greatly affect the cost, and also the comfort of the occupants. This means changed things and thoughts, and these must remain to a certain extent rigid. The all essential materials will govern the whole design. No more will it be possible to buy a four panel door for about 2*s*. 6*d*. (the materials will cost more) or bricks at about 12*s*. a thousand. Consequently in some cases it will be necessary to find suitable substitutes. Wood will have to be substituted wherever possible; celluloid, or such material, used in lieu of glass, if only in portions of windows. Speaking about doors, has it ever occurred to you what a large room it looks until all the doors are open in it, sometimes as many as four or five in one living room and each occupying its part of the floor space? These are details of most vital importance. Again, in place of wall tiles or plaster some hard surfaced slab material will be found to be used as surrounds or dadoes readily fixed or prepared with glazed surface. Breeze bricks or fixing blocks must be built in everywhere to allow security being obtained, and so the whole scheme of erection will have to be framed together with the plan.

DAMAGES FOR BUILDERS.

IN the King's Bench Divisional Court Mr. Justice Shearman and Mr. Justice Sankey heard an appeal by Mr. J. T. Jones, solicitor, of Dowlais, from a decision of Judge Bryn Roberts, at Merthyr Tydfil County Court, in favour of Messrs. Enoch Williams & Sons, builders, of Dowlais, in a claim by the latter for damages in respect of a building contract.

Mr. J. A. Lovat-Fraser was counsel for the appellant, while Mr. Vaughan Williams, K.C., and Mr. Ralph Sutton appeared for the respondents.

In opening, Mr. Lovat-Fraser said Messrs. Williams & Sons tendered for the erection of a dwelling-house and farm buildings at a spot in Cardiganshire, according to plans and specifications prepared by Mr. James Jones, architect, of Tredlewis, Henllam. That tender was refused. Appellant afterwards took Mr. Samuel Williams (of respondents' firm) to the property, and showed him a quarry on the land from which stone and gravel could be taken for the work. Respondents then sent in a tender amounting to £782 16*s*. 8*d*., which was accepted. In evidence in the County Court, Mr. Williams said he searched for stone in the quarry, and found a sort of bastard stone. Appellant, on the other hand, said he agreed to nothing about stones except that Mr. Williams could search for the same free of royalties.

Mr. Justice Shearman: Really it was a question of appellant's word against Mr. Williams' word.

Counsel, proceeding, said the respondents' declaration was that they would not have tendered at the price they did if they had known that stone and gravel were not on the spot. Appellant's submission was that respondents tendered on the strength of Mr. Williams' personal inspection. The case was heard by a jury who assessed damages suffered by respondents at £60, and the Judge entered judgment for that amount. The specification provided that the contractor should view the site and satisfy himself of every circumstance under which the work was to be carried out; that he would be at liberty

* Before describing the system it is necessary to point out that it is a misconception to think that by the metric system we include the French coinage. It is possible to adopt the metric system *en bloc*, for example, without adopting the coinage of the Latin Union. The misconception has arisen from several reasons, principally that the coinage of the Latin Union is decimal, that it has a decimal "fineness" or alloy, and that the coins have been made to metric weights and measurements. The author's opinon as to decimal coinage is set out in Appendix V. rather than in a paper on measures and weights, and is given merely to show that he has no wish to avoid any question arising out of this subject.

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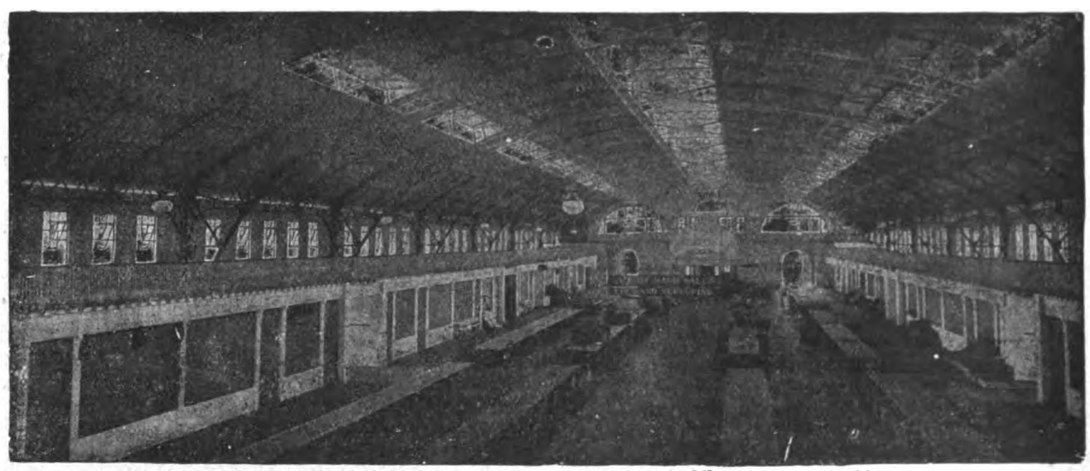
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to quarry stone and take sand on the land provided that no unnecessary damage was done to the land, and that any excavating rubbish would be thrown back into the excavation; and that the contractor should provide everything of every sort and kind which might be necessary for the execution of the work, also all plant, labour and materials, and leave the work in all respects in a clean and perfect condition.

Mr. Justice Shearman: It is a lump-sum contract apparently.

Mr. Vaughan Williams: Yes, my lord.

Mr. Lovat-Fraser, proceeding, said that after four years respondents made the allegation of misrepresentation. He submitted there was no evidence of fraudulent misrepresentation.

Mr. Justice Shearman: An incorrect statement made with an honest mind is no ground for damages, and in this case the jury has not found there was fraudulent misrepresentation. But the notice of appeal to this Court does not include that submission.

Mr. Lovat-Fraser: Then I ask for leave to amend it.

Mr. Vaughan Williams: May I say that my client has been fighting in France, and as far as I know is fighting there now.

Mr. Justice Shearman: It is a strong measure to allow the notice of appeal to be amended, and I would not think of doing it if it meant bringing further evidence. But we should be highly technical if we did not allow Mr. Lovat-Fraser to make amendments which bear on the test of the argument.

Mr. Vaughan Williams: But I have come here to meet a particular case. I submit the appellant's view was that stated in the notice of appeal. I suggest it is rather a dangerous thing to re-draft the notice of appeal long after it has been taken. There were other charges brought upon which the jury found against the appellant—

Mr. Lovat-Fraser: No, no, no,

Mr. Vaughan Williams: Yes, as to whether it came to a question whether a coach-house was included in the original price.

Mr. Justice Shearman: We cannnot go into that. While I think the appellant should be allowed to amend his notice of appeal, on the other hand I agree it is unfair to call upon somebody to meet a case which he cannot treat because a different form of notice has been sent to him.

Mr. Vaughan Williams: If the amendment is made I should ask that it be made subject to my being entitled to prove, if such were the fact, that evidence was given though the Judge may not have put it down.

Mr. Justice Shearman: My desire is to get at the real facts and not to obscure them, and to do that as much on one side as the other.

Mr. Vaughan Williams: I think it would be a hardship on my client to have to re-open these proceedings after these years.

Mr. Justice Sankey: All I understand my learned brother to say is that this matter should be put in order by giving the notice of appeal that ought to be given in the circumstances. At the same time you must be safeguarded so that maybe the mere fact that it is not in the Judge's note would entitle the appellant to succeed. You would be able to give a note or something of the kind saying "There is this which is not on the Judge's note."

Mr. Justice Shearman: Unless by the leave of the Court you can introduce something fresh. (To counsel for appellant): I am inclined to think you are entitled to say there is no evidence of fraudulent misrepresentation, and not entitled to say anything else, and on that the onus is on Mr. Vaughan Williams to show there is such evidence. A wrong statement does not show it is a fraudulent misrepresentation.

The Court accordingly allowed appellant leave to amend his notice of appeal, and adjourned the case for several weeks, the costs being reserved.

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Our Continuity.

SIR,—Many will doubtless share in the regret expressed, both in prose and verse, at the passing away of the late Editor, but there is some satisfaction in knowing that, notwithstanding all the changes brought about by time, the Journal goes on as usual, upholding its high reputation, and reminding one of Tennyson's lines in "The Brook:"

> "For men may come and men may go
> But I go on for ever."

In this connection I notice, incidentally, that the current issue of "The Architect" is numbered 2,584, which indicates that its jubilee is very near at hand. I trust that the publication of the issue No. 2,600, showing that fifty years will have elapsed since the first issue may not be allowed to pass without some special and fitting reminder of such an unique event in professional journalism.—Yours, &c.,

A WELL-WISHER.

London, S.E.: July 2, 1918.

[Our fifty years will be completed at the end of this year, and we certainly hope to be able to commemorate the event (see note in this issue). We thank our friend "Well-Wisher" for his remarks, particularly as we know that for some thirty years he has been a regular subscriber to this Journal.—ED.]

Letchworth Free Church.

SIR,—With reference to your note in your issue of June 28, might I be permitted to commend the attitude taken by the Committee responsible for its erection? I refer to your last paragraph but one, "It was thought wisest to attack the problem of finance first and then get the best advice possible as to architecture." In fact, catch your hare first before cooking him. Other committees might note.—Yours, &c.,

A VICTIM.

London: July 3, 1918.

THE will has been proved of Mrs. E. Waterhouse, widow of the late Alfred Waterhouse, R.A. Net personalty £11,383.

MR. CHARLES J. BLOMFIELD, F.R.I.B.A., has been appointed consulting architect to the Dean and Chapter of Southwark Cathedral.

LIEUTENANT (ACTING MAJOR) ROBERT JOHN BLACKADDER, R.G.A. (Military Cross), is a son of the late Mr. Robert Blackadder, architect, Dundee, and was before the war a chartered accountant in London.

THE death in his eighty-fifth year is announced of Mr. James H. Money, architect, Newbury. He was the architect of the Newbury municipal buildings, the Oddfellows' Hall, and the cattle markets and numerous other local buildings.

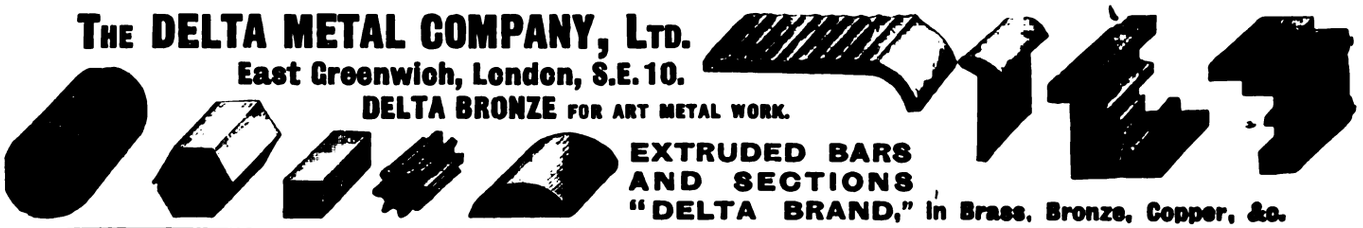
THE important series of articles which have been appearing in "The Architect," and concludes in this issue, entitled "Trade Parliaments and their Work," have now been published in book form at the cost of 1s. net by Messrs. Nisbet & Co., Ltd.

SIR EDWIN L. LUTYENS, A.R.A., has entrusted Mr. Ivor Beaumont, A.R.C.A., F.R.S.A., &c., with the war memorial decorations to the memory of fallen heroes for the Hampstead Garden Suburb Free Church. The wall decorations are to fill the existing architectural spaces, 20 feet by 14 feet, on the side of the organ recess.

A WAR shrine presented by Mr. R. W. Mitchell, of Kerchester, has been placed in Sprouston parish church. It has been made of teak taken from the old battleship "Britannia" with a large copper cross in the centre. Under the arms of the cross and on the two side panels are the names of the men of the parish who have served during the present war.

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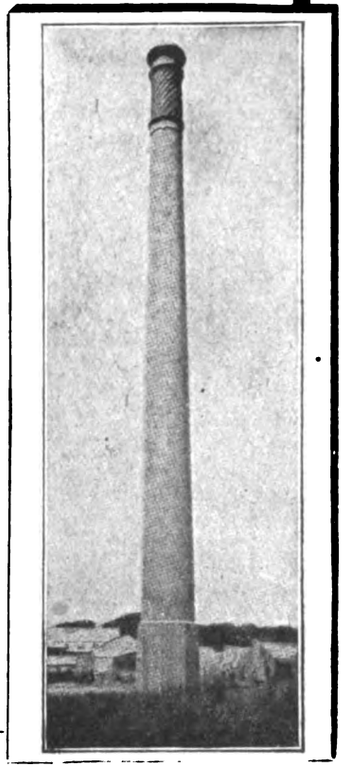
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THE ARCHITECT

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FORTHCOMING EVENTS.

Saturday, July 13.

The Royal Sanitary Institute. Discussion on "Camp Drainage, &c.," by W. H. Beswick, Military Engineer, Larkhill Camp; Town Hall, Swindon, 11 A.M.

St. Paul's Ecclesiological Society. Visit to Merstham and Gatton Churches, conducted by their respective Rectors. Merstham Church, 3.30 P.M.

International College of Chromatics. Foundation Lecture of the College, 3.30 P.M., by Mr. Gonnocké Komai, Japanese correspondent, on Sesshiu, the Unrivalled Priest-Artist of Japan (Colour in Japan in Nature, Poetry and Art). Chairman, Sir Alfred E. Turner, K.C.B.

THE DAWN OF THE FRENCH RENAISSANCE.*

THE particular interest of this work to architects and artists lies in the historical sequences of Italian and French literature and art during the fourteenth and fifteenth centuries. The writer covers a vast amount of ground, dealing thoroughly with the humanist side of Italian and French mental culture. The preface informs us that the section devoted to architecture was read in proof by Mr. Ward, which, however, with the chapter on sculpture, forms a very small proportion of the 600 odd pages comprising the volume.

There are some interesting sidelights thrown upon the life of Isabella d'Este and her sister, Beatrice, wife of Ludovico Sforza, and their associations at Milan with Louis XII., but no reference is made to the "Paradiso" at the Ducal Palace of Mantua, or even the paintings of Mantegna there, although many works in other parts of Italy are referred to.

The remarkable sculpture of Michel Columbe illustrated in its section appears to be nearly as advanced in character as that of Nicholas Stone, who practised in England a century later in similar vein; but the connection of Columbe, Juste, and Marchand with Pierre Fain at Gaillon, when the latter contracted for work in the chapel in 1509, to the tune of 18,000 livres, receives no reference from Mr. Tilley. The volume appears to us somewhat congested, requiring an intimate knowledge of the historical associations of the advancement of Latin and Greek learning in Italy, besides exhibiting an amount of appropriate connection of certain people and events.

The reference to Sansovino on page 481 is somewhat contradictory to a similar note in Mr. Tilley's "Retrospect." Surely Sansovino and his pupil Tatti were predecessors of Michael Angelo!

It was not the intention of Mr. Tilley to deal with the architectural renaissance as associated with the work of Rosso, Primaticcio, and Serlio at Fontainebleau, or that of Jean Goujon at the Louvre; he only leads up to this period, and has therefore chosen an apt title for his work which will be read with considerable interest by all lovers of French art and letters.

Art in France is indissolubly connected with that of Italy, certainly since the conquest of Milan by Charles VIII. Louis XII. favoured the work of da Vinci, Cardinal d'Amboise that of his pupil Solario and Mantegna, while from Mantua Primaticcio came to assist Il Rosso at Fontainebleau. The "Maitre Roux" was a man of system and energy, and Primaticcio young and enthusiastic. The forty years—the latter spent in France coming straight from the tutorship of Giulio Romano at the Palazzo del Tè—could hardly fail to make an impression upon the work of the French architects who were contemporary with him. The work of Dumontier and Cousin suggests this influence.

Domenico da Cortona is said to have made the first plans for Chambord, associated with the name of Pierre le Nepveu dit Trinqueau, which was still in course of erection at his death, in 1538, by Antoine de Troyers, the contractor, under the supervision of Jacques Coqueau. But Mr. Tilley does not take us far enough into the reign of Francis I. to include these men or Giles le Breton's work at Fontainebleau and the Italian school there. Da Vinci was only four years in France, but managed to establish his school at Cloux, near Amboise, where his pupils Solario, Melzi, and Villanio laboured, some of whose works are now in the Louvre.

In making these remarks we do not wish to detract from the value of this work, which is a most scholarly attainment, but, to the mind of an architect a sequel to "The Dawn of the Renaissance" would make the work a most useful one.

* "The Dawn of the French Renaissance." By Arthur Tilley. Cambridge University Press. 1918. 25*s*.)

HUY AND NEIGHBOURHOOD.—II.

By JOHN A. RANDOLPH.

THERE is a small church near the south station with a good apse and a proportionately tall spire.

The town hall on the Grand' Place is effective, but not Gothic. On the square was a fountain — the "Bassinia"—with bronze figures of the fifteenth century and wrought-iron arranged canopy-wise, but probably ere now melted down in a German cannon.

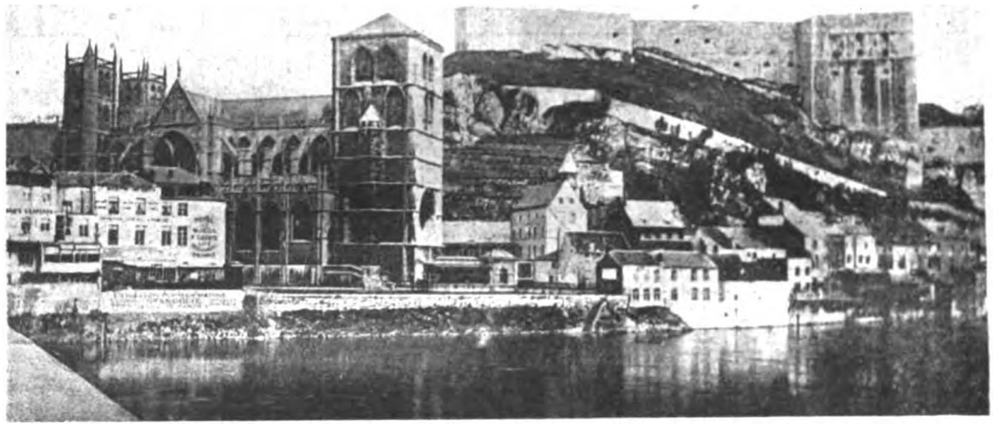
About five miles outside the town is the château of Neufmoustier, formerly part of the abbey founded about 1100 by Peter the Hermit, crusader, whose tomb was there, and to whom a statue has been placed in the old abbey grounds.

On the Quai opposite the Outrebande is a Renaissance three-floored building, with many stone mullioned and transomed windows, and dating from 1606. At one end are several heads, two of which represent Albert and Isabella.

On the same Quai is another beautiful group of Renaissance date, formerly the depository for the products of tithes, and was a dependency of the abbey of Val. St. Lambert, near Liège. The Renaissance cloister and buildings of the Friars Minor are a beautiful example of the period. The great stone gable of the first Chasseurs-à-pied barracks and late circular-headed porte-cochère alongside, in another part of the town, is a monumental feature, the heads of the few windows being unusual. The bases to the shafted mouldings show the building to be of the end of the Flamboyant period.

Four miles Liège way from Huy is Amay, a picturesque little village, with a small cruciform Renaissance church, possessing a very singular oblong Romanesque west tower surmounted by three spires, the central one being the highest. The tone of the bells was quite charming.

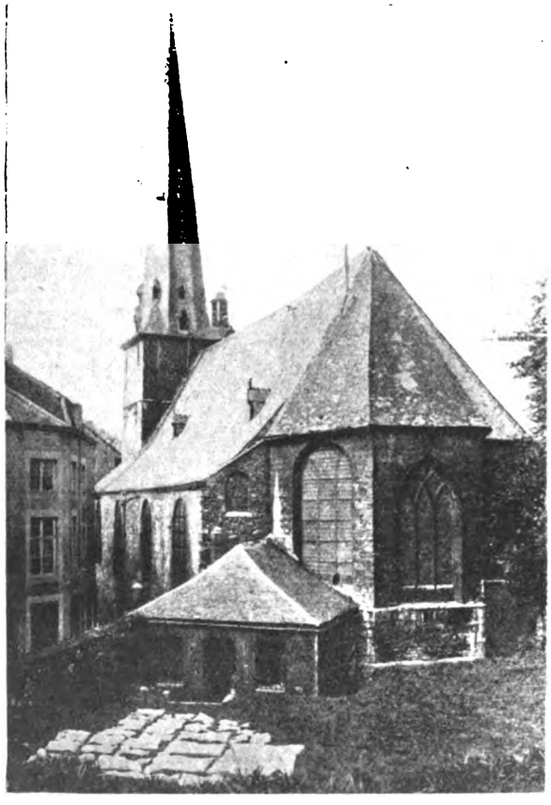
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HUY.—GENERAL VIEW FROM THE BRIDGE.

The seventeenth century château of Modave crowns a rocky prominence, and its outlines are strikingly fine.

Overlooking Statte station, on the Landen-Ciney line, at a considerable height, is a small old church, which is more like a domestic than an ecclesiastical edifice. It dominates the low-lying land towards the river Hoyoux and Moha, at which latter place is another old castle of historic interest in ruins. On the way to it, and close to the railway, is an old farm building (to which we have alluded in a previous article), with a gable over a fine Gothic arch.



HUY.—ST. MENGOLD'S CHURCH.

The château of Fallais, alongside the track, and only lightly hidden from view by a few trees, is a magnificent mediæval building, wonderfully preserved, with the old-world towers crowned by high roofs.

That of Fumal, on a small hill-top overlooking the station, has been very well restored, and its original picturesque lines strictly preserved, though of the two that of Fallais is the truest to type and the most impressive.

Between Fallais and Landen are—one of them close to the railway behind a slight screen of trees—two small Romanesque churches, the nearer one having a bold shallow arcading of the period round the semi-circular apse, and a smaller one under the eaves. Landen itself is a long church of the same period, with a small, well-proportioned tower and spire, and can be seen for a considerable distance on the way north to St. Trond, though it can hardly be said to be in the neighbourhood of Huy.

Between Liège and Huy—practically a south-eastern suburb of Liège opposite Flemalle - is Val St. Lambert, where are some celebrated glass works; formerly the



HUY.—GABLE OF THE BARRACKS OF THE CHASSEURS-A-PIED.

buildings here were a very wealthy Cistercian monastery, the richest of the Order in Belgium. The Revolution ended its religious career.

The eighteenth century château of Chokier and the commandingly placed Aigremont are also in close proximity. The "Wild Boar of the Ardennes," a warlike type of the fifteenth century, operated from here in his fighting exploits. Flône, hard by, in the sixteenth century was an abbey of nuns. The château of Jehay dominates the

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NEUFMOUSTIER CHATEAU, FORMERLY ABBEY.

river not far away. Then, after passing Amay, one sees Ampsin, with a ruined tower, on the opposite bank.

Between Huy and Andenne (see "Call of Belgium") is Bas-Oha, with the remains of the old castle of Beaufort, destroyed in 1544, but again held by the family; and further on past Andenne is Sclayn, with a Romanesque church of great interest and picturesqueness. Nearly opposite, but well "inland," are the ruins of the celebrated abbey of Grand' Pré, destroyed at the Revolution, and near the river, at Samson, are the remains of a twelfth century castle.

Indeed, the whole district formerly teemed with Romanesque churches, monasteries, and mediæval and Renaissance castles.

NOTES AND COMMENTS.

SIR EDWARD POYNTER, Bart., the President of the Royal Academy, has been made a Knight Grand Cross of the Royal Victorian Order.

Immediately at the close of war great developments are to take place in connection with Belfast Harbour. During the year Messrs. Harland & Wolff have rented from the Harbour Commissioners 126 acres of land, and Messrs. Workman & Clark 25 acres, for the purpose of the extension of these, two of the largest shipbuilding industries in the country.

The late Mr. Edward Stott, of Amberley, Sussex, left net personalty of £18,247. After deduction of an amount of £1,500 left to his housekeeper, and a few small bequests, the residue of his estate is left to the President or Council of the Royal Academy for the purpose of purchasing modern pictures or to found scholarships at his or their discretion.

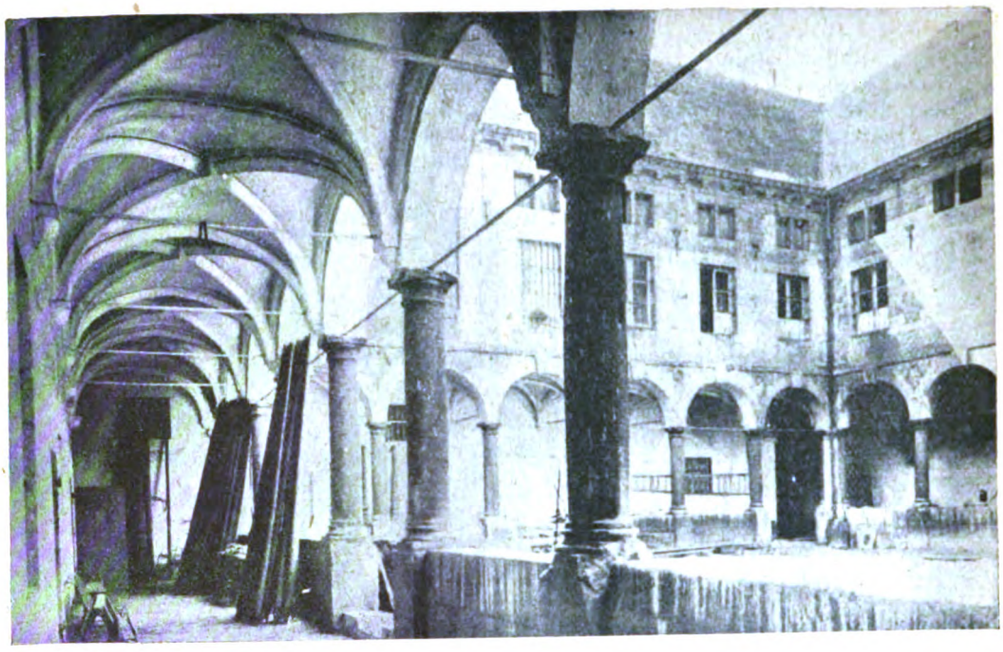
An important decision has been given in a case before the Glasgow Munitions Tribunal by Sheriff Fyfe. On the question raised as to what workmen come within the definition "workmen employed in the building trade" who are exempted from Section 3 of the Munitions Act, which stipulates for a week's notice, the Sheriff decides that "building trade" can only apply to those actually engaged in constructing a building, such as masons, bricklayers, and their general assistants, and that other tradesmen who may be engaged in fitting and equipping the building do not come within the exemption. If the employers' contention were accepted that everybody doing anything about a building is for the time in the building trade, an immense body of workmen employed in many trades would be deprived of the benefit of Section 3, which is now become the cardinal enactment of the munition code, and which was designed to protect workmen in general from being suddenly deprived of work. Applicants were a number of general labourers, and the Court granted them a week's wages in lieu of notice.

We are, as a nation, engaged to-day in the greatest war this country has ever seen. It seems incredible, under the circumstances, that 25,000 men engaged on work of the utmost national importance should be out on strike. The cause is so trivial (the dismissal of one man) that it would be laughable if it were not so tragic. The Ministry of Munitions has made every possible effort to get the matter settled by arbitration, but at the time of writing the men remain obdurate. In common fairness to those men who are risking their lives at the Front that the men who remain comfortably at home may continue their work in safety, we appeal to those on strike, and we trust that ere this issue is published saner reason will have prevailed and the men have returned. Should this not be the case, we hope that the Government will deal promptly with the situation by enforcing a rule that he that will not work shall fight. We are up against the biggest thing in this war that the Empire has ever faced, and only by loyal effort shall we, with our Allies, come through victoriously.

The clerk and law agent of George Heriot's Trust, Mr. Peter Macnaughton, S.S.C., has prepared notes on the findings of a special committee of the Edinburgh Merchant Company on the building trade in Edinburgh. He agrees that stagnation occurred previous to 1914, so that it is quite independent of any special conditions brought about by the war. There can be no doubt, he says, that property has depreciated in value to a large extent within recent years. It would seem to be desirable to have a readjustment of taxation on heritable property. House ownership for personal occupation, he thinks, is desirable among all classes of the community. Mr. Macnaughton states that the policy adopted by the Governors has always been to expose building ground to public auction and the market price obtained. If ground were feued at lower rates than market value by the superior it would not, it is believed, reduce the price of the ground for building purposes, because the builder, should he obtain a feu at a low rate of feu-duty, would sub-feu it at a much higher rate.

On Saturday last a meeting of the North-Eastern District of the Institution of Municipal and County Engineers was held at the Town Hall, Bradford. The district chairman, Mr. F. W. Spurr, of York, in the course of his remarks, stated that housing in the future would no doubt be developed on town-planning lines and in accordance with carefully considered schemes providing for traffic roads, allotments, recreation grounds, shopping and industrial centres, &c. Of course, the type of house erected must vary with the local requirements. Undoubtedly from his mind, the most satisfactory tenement would be the one without projections at the

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HUY, FRIARS-MINOR CLOISTER

rear, which had the effect of shutting out air and light from the rooms which were chiefly used. The cottage of from three to four bedrooms would be those most required, with the addition for families of grown-up children of a parlour, as well as the living-room and scullery. Mr. Dawson, of Bradford, pointed out that cost of labour and material would, after the war, remain high, and we should be bound to cheapen construction in every way possible. The estimate of Mr. Morris, of Wakefield, was that the pre-war cost of a house was, say, £200; the present-day cost would be somewhere about £420.

ILLUSTRATIONS.

"ARDENRUN PLACE," LINGFIELD, SURREY.—MUSIC ROOM AND DRAWING ROOM.

THE PANTHEON, ROME.

THIS illustration is No. LIV. from Taylor & Cresy's "Rome."

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE EXAMINATIONS.

THE FINAL: ALTERNATIVE PROBLEMS IN DESIGN

Instructions to Candidates.

1. THE drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, and his full name and address, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawings for subjects (*a*) are to have the shadows projected at an angle of 45 degrees in line, monochrome, or colour. Drawings in subjects (*b*) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

Subject XL.

(*a*) A Memorial Public Fountain: Drawings, plan and elevation to ½-inch scale with full-size details.

(*b*) Factory to hold 300 hands—in the London district—to conform to the Factory Act and to all local conditions. Buildings to contain engine house and general office, mess rooms for hands, and showroom, lavatory accommodation. Lifts for raw materials to top of building, packing room with due access to road and railway. Show possible extensions outside for future developments.

Subject XLI.

(*a*) Artist's Studio and House on an Island in a Lake: Drawings, plans, elevation and section to ⅛-inch scale and 1 sheet of details to ½-inch scale.

(*b*) Dairy for a large Country House: Drawings, plan, 2 elevations, section to ¼-inch scale with any details to ½-inch scale.

Subject XLII.

(*a*) The first floor of a City office is used for board-room, chairman's room, chairman's lavatory and staircase. Size of building between walls, 30 feet by 17 feet 6 inches. Building lighted front and back. Give plan and section to ¼-inch scale, also section through board-room and staircase landing to 1-inch scale with full-size details.

(*b*) A gentleman farmer has decided to build a pair of cottages for his head gardener and head stableman at a cost of about £500, the paid pre-war prices. Required plan, elevation and section to ¼-inch scale, working drawings. Cube out the building and show how you work out the cost.

Dates for Submission of Designs in 1918-19.

	Subject XL.	Subject XLI.	Subject XLII.
United Kingdom .	August 31	October 31	December 31
Johannesburg .	October 31	December 30	Fe ruary 28
Melbourne . .	November 30	January 31	March 31
Sydney . .	November 30	January 31	March 31
Toronto . .	September 30	November 30	January 31

THE Memorial Committee of the Council of the Eton War Memorial Fund have been authorised to proceed with the execution of a scheme for the restoration and dedication to the memory of Etonians fallen in the war of the chapel by the north porch of College Chapel. Further suggestions are under consideration of the inscription of names on a stone frieze under the colonnade of Upper School, frescoes in Lower Chapel, and a memorial cross on the grass plot in Weston's Yard.

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MEDIÆVAL INSCRIPTIONS ON CHURCH BELLS.

ON Wednesday, July 3, at the annual general meeting of the Royal Archæological Institute of Great Britain and Ireland, held at Burlington House, Piccadilly, the Rev. A. H. F. Boughey, M.A., of Trinity College, Cambridge, delivered an illustrated lantern lecture on "Mediæval Inscriptions on Church Bells."

Mr. Boughey, at the outset of his lecture, said that as a student of bells for many years, and as a practical ringer, he wished to express the thanks of himself and others to the great pioneers and writers of bell-lore. His own researches had been small, and indeed any individual could only expect to examine a very limited number of bells. All the more were they indebted to the labours of such workers and authorities as Ellacombe, North, Raven, Lukis, Walters, Stahlschmidt, Cocks, and others whom he had freely consulted, and to whom he desired to acknowledge his indebtedness. He intended to deal with inscriptions found on bells which were made in England in the mediæval period, to be hung in church towers, and he wished to show how any inscription was useful in helping to decide the date of the bell on which it occurred, and to enunciate some principles for criticising, elucidating, and, where necessary, amending inscriptions. In the case of bells he took the mediæval period to end with the Reformation, or practically with the beginning of the sixteenth century; and in using the word "inscription" he included everything, words or marks, impressed upon bells when they were cast—everything which bore any message or meaning or which could give them any information about bells. For the purpose of learning the date of a bell obviously the first and simplest and clearest help was when the bell bore its own date stamped upon it. Unfortunately, in early days the inscription or date was very rare in English bells, although it was common—almost usual—in foreign bells. Amongst the English bells which they possessed and knew only about a score or so earlier than the year 1500 bore actual dates. Fortunately, on the other hand, one or two very early bells were dated; and those were of great use in guiding them to the chronology of others. The earliest certain date which they had was 1296, which was the date inscribed on a bell at Claughton, in Lancashire. The next dated bell was at Cold Ashby, Northants, which was dated 1317. They then had to go on for more than eighty years before they found, still existing, another dated English bell.

The second form of inscription which helped to an approximate date was that which mentioned a living person—either the donor or the founder of the bell. They had an early example of that by Mr. Cocks in his book on church bells in Bucks, where he gave the following inscription on a bell at Caversfield: "Hug(h) Gargat Sibillaq(ue) u(x)or ei(us) h(anc) ca(m)panam fecerunt exponi."

Hugh Gargate was lord of the manor at the beginning of the thirteenth century. In a document of, or about, the year 1219 they had mention of his widow; so the bell, therefore, was earlier than 1219. As an example of an early bell-founder they might take from Mr. Cocks' book a bell inscribed: "Michael de Wymbis me fecit." Michael de Wymbis was mentioned in a deed of 1297 as "Michael the Potter," and in one of 1310 as "Michael de Wymbish, late potter"; so the bell must be earlier than 1310.

Next to the names of founders as a clue to the date of bells inscribed with them came the marks—crosses, stops, &c.—used by particular founders and foundries. Those were of great assistance and were very plentiful. Almost every mediæval bell inscription began with a cross, and marks were freely interposed between the words, sometimes even between syllables of a word. They could generally be identified and connected with certain or approximate dates. A small but interesting class of marks was connected with royal arms, royal heads, and coins of the realm. Strictly speaking, those only indicated negatively a date before which the bell could not have been founded; but a coin inserted in the bell-mould would probably be that of the current reign. The royal heads found were possibly those of Edward I. and Queen Eleanor, certainly those of Edward III. and Queen Philippa, and of Henry VI., Queen Margaret, and Prince Edward. In 1367 John Rufford was appointed by Patent Royal bell-founder to Edward III., and so justly put the king's and queen's head on his bells. Henry VI.'s head was connected by Mr. Walters with a foundry at Worcester about 1480. From a drawing which remained of old bells, unhappily destroyed in the eighteenth century, of King's College, Cambridge, they saw a king's head upon one. What slight notice had been taken of it assumed that it was the head of Edward III., which was certainly used long after his reign. From certain facts, however, the lecturer was not inclined to accept that conclusion, and he ventured to think that the use of Henry VI.'s head on bells began, not at Worcester about 1480, but with John Danyell, in London, when he received a commission for bells from the king about 1460.

Another important evidence for date was the style and shape of the letters in bell inscriptions. Shape was often an indication of date. For instance, the shapes of bells themselves varied at different periods. The oldest church bells were much longer, narrower, and straighter than their successors. The lettering of bells in mediæval times might be divided into three great types, Roman, Gothic, and black letter, the earliest inscriptions which they possessed being in Roman, of the style sometimes called Anglo-Saxon. The Gargat bell letters, earlier than 1219, were purely Roman; and so, he believed, were those on a bell, which was undated but very early, at Marston, in Yorkshire. When they came to Chaldron and Claughton bells, in the latter half of the thirteenth century, they already found slight traces of Gothic influence. From the beginning of the fourteenth century till about the end of the first quarter of the fifteenth century the type of letters used was regularly that known as Gothic or Lombardic. In that, as in the Roman type, only capital letters were employed, and they were of great beauty. From about 1400 began the use of what were known as "black letters," and for some time it ran concurrently with Gothic. Very often in inscriptions each word began with a Lombardic capital and went on with black letters. The black-letter type continued until, and after, the end of the mediæval period.

Mr. Boughey, in conclusion, reviewed the ancient legends on bells, and pointed out the difficulty one often found in reading them and the inscriptions owing to the abbreviations which were commonly used by the founders.

On the proposition of Sir Henry Howorth, who was in the chair, a cordial vote of thanks was accorded Mr. Boughey for his lecture.

Prior to the lecture the annual meeting of the Society was held.

Sir Henry Howorth proposed the adoption of the seventy-sixth annual report, and remarked that it was a source of much satisfaction that despite the long drawn-out war the Society had suffered so little. They had lost a few subscriptions, chiefly those of German libraries, but they had gained some fresh subscribers. On the whole, the Society was in a very healthy condition as regarded membership. They had had to abandon their summer meeting, but the ordinary afternoon meetings had been continued. The financial position was thoroughly sound, there being a surplus of £160 on the year's working, which, with other moneys in hand, had been devoted to the purchase of War Loan.

Sir E. Brabrook, in seconding the motion, said the Council had been able to invest over £300 last year. They now possessed investments of the nominal value of £4,300, but their present market value was only about £3,300. That, however, need cause them no concern

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as there was little prospect of their having to realise any stock, and in the meantime they were receiving interest.

The report was adopted.

THE TOWN-PLANNING INSTITUTE.

AT the conclusion of Mr. Rees Jeffreys' paper, reported in our last number, it was decided to confine the discussion to the first point, viz. the problem of areas.

Mr. Reay Nadin said the subject was most opportune at the present moment, because in this era of reconstruction many problems would have to be carefully considered by local authorities. The suggestions of Mr. Rees Jeffreys would commend themselves to most of them, but he thought it would be better if he substituted the word "federation" for "unification," because they must take sentiment into consideration and not wound the susceptibilities of the smaller authorities, who undoubtedly would sooner or later have to fall into some lines of federation. A great feature of the country had been the freedom given to local authorities of a reasonable size, but from experience of life in various towns, he had come to the conclusion that they could make their towns too big. At the same time, there were some services which could only be carried on efficiently by a really large body, and if they could link up various bodies for specific purposes, it would be a good thing and a saving of expense. As the result of the Act of 1888, little equity was shown as between urban and rural districts, for rural interests were so strongly represented on County Councils. He would deprecate any further powers being given to County Councils. Town planning was essentially of an urban nature, and could only be dealt with satisfactorily by the boroughs and the urban districts concerned.

Major Lovelock (Carshalton) said that for the question of boundaries the County Council was the worst possible body to have authority, as its interests were so greatly involved. He attached great value to federation for definite purposes, but would advocate the establishment of a permanent commission for dealing with the question of boundaries as they arose.

Mr. Mawbey (Borough Engineer, Leicester) said that his Corporation was considering a town planning scheme and was very keen on having a ring road round the town. It would be no use making it in the developed portions of the town, and therefore it was suggested that it should go partly through the districts of six adjoining authorities. They were endeavouring to get those authorities to join it, but the difficulty was that of cost. He considered the case was a good illustration of the arguments put forward by Mr. Rees Jeffreys.

Mr. Montagu Harris (Secretary, County Councils' Association) said no one would suggest that a big town should be empowered to plan all the area of a county any more than the County Council should concern itself with the planning of a town; but the difficulty still remained as to what was going to happen with regard to an area which at present was a part of the county, but which there might be every reason to fear or to hope was going to become part of the town. Reference had been made to Birmingham, and from one point of view it might be desirable for a town to become possessed of an enormous amount of land of a rural character. As one who was greatly interested in the garden city idea he did not believe it was a desirable thing that towns should grow indefinitely. Therefore he felt the County Council must have something to say with regard to the planning of an area which still remained part of the county. Here perhaps came in the question of federation, and that was certainly a desirable thing to carry out as far as possible. Whilst sentiment might come in, yet the thing was to have everything done from the point of view of efficiency, and in that connection there was much to be said for the commission suggested by Mr. Jeffreys.

Mr. H. R. Aldridge (National Housing and Town-Planning Council) expressed himself in opposition to Mr. Rees Jeffreys' suggestion for the setting up of a commission, and said he did not believe the country would allow of such bodies being set up which were not directly responsible to Parliament. As an alternative he considered they ought to support the setting up of a powerful Ministry of Health and Local Government. This should be scientifically organised, controlled by competent men, and should be enabled, where public service broke down owing to the smallness of an area, to insist on joint boards being formed for carrying out the service efficiently.

Mr. H. E. Stilgoe (City Engineer, Birmingham) said he did not think they made sufficient use of the powers they had under the Town-Planning Act, and in the case of a town wishing to make a ring road partly in the district of a neighbouring authority, it was within the power of the Local Government Board to compel the latter authority to prepare a scheme. Even if County Councils were included amongst the responsible bodies for the purposes of the Act, it would not cover all the points, because there were many instances where the areas of Borough Councils met, and even though the two councils might be willing to prepare schemes, it did not follow that they would see eye to eye in the schemes they prepared. He favoured the federation of authorities for specific purposes.

Mr. G. L. Pepler said it was true the Local Government Board had the power to compel a local authority to prepare a scheme, but it was hardly likely they would make an authority include in its scheme something which might be very costly, and which the authority said it could not afford to do; and particularly if the greatest benefit from the work would accrue to some other authority.

Mr. J. A. Brodie (City Engineer, Liverpool) said all the talk of little authorities carrying out town-planning schemes would end in talk, and he would not expect any small authority on the outskirts of a large town to do such work, when in all possibility it would become part of the town in the future. The expense of town planning and of making the main lines of communication should, in his opinion, fall on the larger authorities, and if they had foresight they could recoup themselves by their tramways system and by rateable value. If such work was carried out by a small authority it was only half done, and eventually had to be done over again. Efficiency must be studied in the country, and for himself he had no great faith in Parliamentary methods, for he had always failed to find anything in the shape of efficiency where control was given to Parliament. They might take it that the talkers would get into Parliament again. They wanted to look round for really competent men and give them the greatest amount of freedom that was possible. They must have areas big enough to do what was required and able to pay for the work.

Mr. Davidge said they had no machinery now as they had in the days of the turnpike roads. They had new difficulties to deal with, and these could only be carried out by larger authorities. Some central authority must be formed, and the President of the Local Government Board had rather foreshadowed the federal idea when he said it might be that before long Parliament would be in the melting pot.

Mr. Lancashire (Leeds) said his Council was considering a big housing scheme, and a colliery company which owned a great deal of land in an adjoining rural district had offered them land at agricultural value and also land for a light railway, so that the workers might be carried into healthy surroundings on a high plateau. The difficulty was that the land was outside the city, and it could hardly be expected that the Corporation should spend large sums of money on schemes unless they controlled the territory.

Professor P. Abercrombie asked if Mr. Rees Jeffreys had considered any proposals for areas, as for some purposes the areas of County Councils would not be large enough.

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The Chairman said he was certain that they must have some body which could initiate schemes, but Government departments proved inefficient because they were given both administrative and judicial powers.

Mr. Rees Jeffreys said that finance was at the bottom of all these things, and they must have rating areas if schemes were to be carried through.

RECENT DEVELOPMENTS IN THE THEORY OF VENTILATION.

By CHARLES L. HUBBARD.

THE term "recent" as used above has a somewhat broader meaning than is usually given to it, as the developments referred to had their beginning some ten or twelve years ago. However, it is only within the past three years or so that a general discussion of the matter has appeared to any extent in the technical journals, and at the present time investigations are still being carried on to reduce these theories to a practical working basis.

It is proposed in the present article to review the matter in a simple manner, giving what seems to be the general opinion of a majority of those who have made a special study of the subject and who should be able to give reliable information to those interested. As these new developments, when finally worked out, are likely to call for more or less change in building construction, as regards the ventilating arrangements, it would seem that the matter should have an especial interest for the architect.

Air has two principal functions: a chemical and a physical; it aerates the blood and absorbs the body heat. In order to perform the first of these it must contain a sufficient amount of oxygen and a minimum of harmful gases. Absorption of bodily heat depends upon the temperature, humidity and motion of the air. If the air of a room is not renewed its oxygen is gradually consumed, and it becomes laden with heat and moisture from the bodies of the occupants.

Until within a comparatively short time all efforts toward better ventilation have been directed to chemical improvement instead of physical.

The theory upon which all systems of ventilation were formerly designed was that the percentage of oxygen must be maintained as nearly as possible to correspond with that of outside country air and that the proportion of carbon dioxide, or carbon acid gas, must be kept below a certain maximum. The method employed for obtaining this condition was that of dilution or the supplying of large volumes of fresh air at the room temperature or higher, depending upon the system of heating employed. Normal outside air contains approximately 21 per cent. of oxygen and from 3 to 5 parts of carbon dioxide in 10,000 parts of air. It has been assumed, arbitrarily, that the carbon dioxide should not be allowed to rise above 10 parts in 10,000, and for the best results 6 to 7 parts have been considered the limit.

The harmful results of an insufficient air supply were supposed to come principally from the poisonous effects of the carbon dioxide coupled with the corresponding diminution of oxygen. Later it was thought the effect of poor ventilation was due, not only to the presence of carbon dioxide, but to certain harmful gases and organisms which were given off in the process of respiration. As these substances were supposed to exist in a fixed proportion to the carbon dioxide, the latter was still considered to indicate the quality of the air, although in itself it was thought to be less harmful, especially in small quantities.

The common allowance of 30 cubic feet of air per occupant per hour is based on an increase of carbon dioxide from 4 parts in 10,000 of air to slightly less than 7 parts. A maximum of 6 parts in 10,000 calls for a supply of 50 cubic feet per minute under the same conditions. As already stated, the sole object of ventilation was one of dilution, so as to keep the carbon dioxide content and its accompanying products of respiration below a certain percentage. While this has been the accepted theory of the heating engineer and the general public until a comparatively recent date, there has been some doubt among those engaged in laboratory research as to the importance of the chemical purity of the air to the exclusion of its physical characteristics, and it was only with the advent of the air washer that we began to learn of the advantages of air "conditioning."

The perfection of the air washer was the outgrowth of the demand for a filter which would be more effective and more nearly automatic in its action than the older forms of dry filter, which were extremely bulky when made of the proper proportions and required frequent removal for cleaning in order to limit the resistance to air flow. While the primary use of the air washer was for the removal of dust and soot from city air, its field was soon extended to air moistening, cooling, and the removal of some of the products of respiration.

Although most of the ventilating systems at the present time are designed along the same general lines as in the past (with the exception of air washing in large city buildings), the *theory* of ventilation, as accepted by many of the leading authorities at home and abroad, has radically changed, the idea being that the physical characteristics of the air we breathe are of much greater importance than chemical purity.

While there are still some who give considerable importance to the chemical theory, a majority of those who have made an exhaustive study of the matter seem to have discarded the older theory and recommend that future development in the design of ventilating equipment be along the line of improvement in temperature and humidity control and in air movement.

Briefly stated, the chemical composition of the air, as regards contamination through respiration under ordinary conditions, is negligible, as compared with the removal of bodily heat and moisture. It will be interesting at this point, before considering the physical effects of air, to examine briefly into the reasons for this change in theory in regard to the chemical characteristics, as related to bodily health and comfort.

In order to show the relative importance of changes in the percentage of oxygen and carbon dioxide in the air for breathing, it is necessary to have a clear understanding of the process of respiration and the changes which take place in the air within the passages of the respiratory tract. At the beginning, it should be clearly understood that the lungs are never filled with *pure* air, even under the most favourable conditions, because breathing is only a frequently repeated slight dilution of the air remaining in the throat and larger bronchial tubes after expiration.

So far as its chemical composition is concerned, this is air which has passed out of the lungs, and after being mixed with a certain proportion of outside air, during the next breath, is again drawn into the lungs as a mixture which does not even remotely approach chemically pure air. This results in making respiration a continuous instead of an intermittent process, and so provides for a constant supply of oxygen which is necessary to the life of the tissues.

Thus we see that any changes in the proportion of oxygen and carbon dioxide, which are likely to occur in the air of a poorly ventilated room, will have no appreciable effect upon the air within the lungs.

As previously stated, pure outside air contains about 21 per cent. of oxygen, and this hardly ever falls below 20 per cent. in the poorest ventilated room. As the air in the lungs contains but 16 per cent. under normal conditions, it is evident that any changes which may take place in the oxygen content of the surrounding air will have but slight effect internally. Furthermore, the supply of oxygen in the lungs is not dependent upon the outside conditions, but is regulated by the amount of carbon dioxide dissolved in the blood, and this, in turn, acts upon certain nerve centres which control the depth

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and rate of breathing. If the carbon dioxide falls too low, stimulation of the nerve centres ceases, and the process of respiration does not take place until the proper proportion has again been accumulated. The normal proportion of carbon dioxide in the air of the lungs is about 5 per cent., and is kept at this point automatically by the action of respiration. Under these conditions the only effect of breathing in an excess of this gas with the surrounding air is an unnoticeable increase in the action of the lungs through faster and deeper breathing.

Thus we see that the amount of carbon dioxide remaining in the blood depends entirely upon internal conditions rather than external, and is entirely automatic in its action—the rate of ventilation of the lungs being the means by which a proper balance is maintained between the oxygen and carbon dioxide.

It is also evident that our chief safeguard against a want of oxygen by the body tissues is a definite accumulation of carbon dioxide, and this is maintained by re-breathing the "dead-space" air, so called, contained in the throat and larger bronchial tubes.

Besides the necessary reinspiration of the dead-space air, it is also known that one usually takes in again a part of the breath entirely expelled from the body during the preceding expiration. When standing alone in a room a person will rebreathe from 1 to 2 per cent. of the air he has just exhaled. When lying in bed he will rebreathe from 2 to 6 per cent. or more, depending on his position, and even in the open, if there is a shield to break the wind, a small proportion is taken back with nearly every breath.

While the above seems to prove the fallacy of the older method of reasoning, it is interesting to note the results of certain experiments which have been carried out from time to time. Although a large amount of investigation has been done in this direction, space allows the mention of only a few results.

As far back as 1842 Leblanc found that an animal could survive exposure to atmosphere containing 30 per cent. of carbon dioxide, provided the proportion of oxygen was 70 per cent., and recover quickly from the depression produced by this mixture.

Pettenkofer, in 1849, demonstrated that the symptoms produced in crowded places were due neither to an excess of carbon dioxide nor a deficiency of oxygen. He also found that air containing 1 per cent. (100 parts in 10,000) of carbon dioxide could be breathed for hours without discomfort, and laid down the doctrine, accepted by sanitarians, that the percentage of carbon dioxide was only a guide to the other harmful properties contained in the atmosphere.

Later tests in an English brewery, where carbonic acid was compressed and bottled, showed the air of the workroom to contain from 0.14 to 0.93 per cent. of this gas (14 to 93 parts in 10,000). Work was carried on continuously in 12-hour shifts, the men having their meals in the room. Some, it is stated, had followed this employment for eighteen years without detriment to health.

Other experiments have shown that the air may contain from 3 to 4 per cent. (300 to 400 parts in 10,000) of carbon dioxide before increased respiration will be noticed by an individual at rest, but percentages over 1 per cent. (100 parts in 10,000) diminish the power to do muscular work.

The widespread belief in the presence of organic poisons in the expired air is mainly based on the statements of Brown-Séquard and D'Arsonval, and it has been assumed by sanitarians that the carbon dioxide must be kept below 10 parts in 10,000 of air to prevent harmful results from this condition, the percentage of carbon dioxide being taken as an index of their amount.

The evil smell of crowded rooms has long been accepted as proof of the existence of such poisons. As a matter of fact, such odours come from secretions of the skin; from food eaten, such as onions and garlic; decayed teeth; the bad breath of dyspepsia; soiled clothes, etc., etc. While such a mixture of odours is offensive and disgusting, it has been proved to be harmless, so far as its direct effect upon health is concerned.

The theory of Brown-Séquard and D'Arsonval was based on three series of tests, as follows: In the first case, water with which they had repeatedly washed out the air tubes of a dog, was injected into the blood-vessels of a rabbit. In the second, they injected the water condensed from the exhaled breath of a man; and in the third, the water condensed from the breath of a dog. The principal symptoms recorded were dilation of the pupil, acceleration of the heart, and paralysis of the lower limbs. The larger doses caused, as a rule, laboured breathing, retching and contracted pupils.

Extensive investigations carried out along this same line more recently have proved this theory at fault and seem to show that the results were due to the injection of comparatively large quantities of water, or to its containing infectious bacteria, rather than to any harmful organic matter.

For example, an experiment was arranged where the breath of one dog was exhaled directly into the lungs of another continuously for nearly seven hours without harmful results.

In other cases the exhaled breath of human beings was condensed, then dried, sterilized, mixed with distilled water, and injected beneath the skin of rabbits and mice. Here, as before, no sign of disturbance was shown. In comparison with this, both rabbits and a puppy were killed by injecting sufficient quantities of pure distilled water.

A considerable portion of the above data has been obtained from the Smithsonian Miscellaneous Collections, Volume 69, No. 23, which gives a large number of other tests along similar lines.

Having shown, in a general way, the course of reasoning followed in discrediting the older theory of ventilation, let us now see what has been advanced to take its place.

More than thirty years ago Hermans suggested that the results of poor ventilation might be due, in some way, to heat rather than the chemical condition of the air, and recent investigations have been carried out along this line.

Experiments show that an ordinary adult will produce, and must be relieved of, sufficient heat in the course of an hour to raise the temperature of 1,000 cubic feet of air 15 or 20 degrees. In addition to this, a considerable amount of moisture is given off, partly by perspiration and partly as vapour in the air exhaled from the lungs.

Unless this heat and moisture are promptly removed the body becomes surrounded by an envelope of stagnant air, having the same effect as an oppressive day in the summer, with a high temperature and excessive humidity.

The remedy for this condition is evidently suitable temperature and humidity regulation and air movement, which combination forms the basis of design for the latest systems of ventilation.

The physiological effect upon the human body of overheating is a derangement of the vaso-motor system, that is, the nerves which regulate the circulation through the blood-vessels, other than the action of the heart. For example, a cool wind striking the skin stimulates, through the sensory nerves, the vaso-motor constrictors, which causes the small vessels near the surface to contract and drives the blood deeper in the tissues and so preserves the bodily heat. A warm wind, or other source of external heat, causes the superficial vessels to dilate and draws the blood to the surface, thus cooling it more rapidly and maintaining the normal bodily temperature. Health, and life itself, depend upon a uniform temperature of the blood, the usual sunstroke or heat prostration being the result of a very slight rise in temperature. When the heat-regulating functions of the body are interfered with by an envelope of still air, at a high degree of temperature and humidity, the usual discomforts of a sultry day or a badly ventilated room are experienced.

Briefly stated, living beings constantly produce and give off to their surroundings an excess of bodily heat. This heat must be disposed of, and is constantly carried

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away from the body, partly in the air exhaled from the lungs, but chiefly through the skin by radiation and conduction assisted by the evaporation of perspiration. It is evident that the prompt removal of this heat will depend upon a surrounding atmosphere neither too hot nor too moist, and, furthermore, that the process will be hastened if the air is in motion.

Either too high a temperature or too much moisture in the air will retard the cooling of the body, and when these two conditions occur at the same time, as is usually the case in a poorly ventilated room, the result is doubly harmful.

According to this conception, the problem of ventilation is one of physics and not of chemistry. It seems strange that although more than thirty years have elapsed since this doctrine was first advanced, so little has been known of it outside of laboratories, and that the theory of an excess of carbon dioxide and a mysterious organic poison has prevailed so persistently until the present time.

An interesting coincidence which may be mentioned at this point is, that the usual allowance of 30 cubic feet of air per occupant per minute, based on the amount of dilution to maintain a certain standard of chemical purity, is also the amount of air which is required to remove the heat and moisture given off by one person when introducing it into the room at a temperature 10 degrees less than the room temperature, which is about as low as is possible without causing drafts or chilling the occupants.

This fact is not only of general interest, but serves to show that our modern ventilating systems, while designed upon a wrong assumption, may be made to fulfil the requirements of our later ideas, pending future developments in the way of greater efficiency and effectiveness.

Thus far the new theory of ventilation has been stated as a fact without giving any of the reasons leading up to its adoption.

Investigations in this direction have been under way for a number of years and are quite fully reported in the publication of the Smithsonian Institution previously referred to. Only a few of the simpler experiments will be mentioned in the present article.

In a series of tests at the Institute of Hygiene in Breslau, and reported in 1905, normal individuals were placed in a cabinet of about 80 cubic feet capacity and confined for periods up to five hours until the carbon dioxide rose to 100 to 150 parts in 10,000. No symptoms of illness or discomfort were felt, and the chemical impurity of the air had no effect upon the mental activity of the occupant so long as the temperature and humidity of the air were kept moderately low. Raising the temperature to 75 degrees and the humidity to 89 per cent., with the carbon dioxide at 120 parts in 10,000, caused much discomfort. Breathing outside air through a tube gave no relief under these conditions, while breathing air from the cabinet by those outside caused no discomfort.

Circulating the air within the cabinet, by means of a fan, without changes in temperature, humidity, or chemical composition, removed the disagreeable symptoms experienced by the occupants. When the chamber was cooled to 62 degrees there were no feelings of discomfort, although the carbon dioxide rose to 160 parts in 10,000.

Experiments reported in Bulletin 175, U. S. Dept. Agriculture, page 235, show that a man can live many days in a closed calorimeter chamber in comfort, without damage to his health, and having not the slightest knowledge of any defect in ventilation when the carbon dioxide rises to 100 to 200 parts in 10,000, so long as the air in the chamber is kept cool and dry.

Recent investigations have also been carried out along a similar line in the Physiological Laboratory of the London Hospital Medical College with practically the same results.

In this case the chamber was of wood made airtight with suitable insulation, and equipped with an electric heater, a coil through which cold water could be circulated, humidifying apparatus, and two electric fans for circulating the air within the chamber. Without going into details, the results showed that decreased oxygen and an increase in carbon dioxide up to 200 to 500 parts in 10,000 had little effect upon the pulse, while the temperature and humidity had a profound effect. The feelings of discomfort which were produced depended upon the excessive heat and humidity and were relieved by cooling and stirring the air by means of the water coil and fans. The carbon dioxide could be suddenly raised to 200 parts in 10,000 without the occupants becoming aware of it. Those outside the chamber could breathe air from within, through a tube, without experiencing any of the discomfort felt by those inside when the temperature and humidity were high, while the breathing of outside air by those within the chamber brought no relief.

A series of tests carried out some time ago by the Chicago Commission of Ventilation seemed to show that there was a temperature and humidity range within which the occupants of a room were comfortable, and this range has given rise to what is called the "comfort zone." This means that there is a maximum temperature with a minimum relative humidity, and a minimum temperature with a corresponding maximum relative humidity, between the limits of which the occupants of a room are comfortable. In other words, there seems to be no *best* temperature or *best* relative humidity; but the maximum temperature at which one is comfortable will be associated with a minimum relative humidity and the minimum temperature for comfort will have associated with it a maximum relative humidity.

Under the conditions of the tests made, it was found that a temperature of 64 to 70 degrees with a corresponding relative humidity of 55 to 30 per cent. seemed to be the limit; that is, the comfort zone was between 64 degrees with 55 per cent. humidity, and 70 degrees with 30 per cent. humidity.

We have heard much recently of the necessity of more humidity in the air we breathe, the atmosphere of our dwellings and public buildings being likened to that of an arid desert.

While a certain amount of moisture adds to our comfort, too much is injurious to health, as shown by the experiments just described. Taken alone, a certain degree of humidity does not signify very much, within certain limits, but must be considered in connection with the existing temperature; the combination being what produces comfort or discomfort. It is probably safe to say, where no special provision is made for humidity control, that during the winter our dwellings are too dry and our audience halls and theatres too moist. This is due to the proportion of cubic space per occupant, being large in the former and small in the latter case.

While much has been said of the harmfulness of too dry an atmosphere and its effect upon the mucous membrane of the respiratory passages, there seems to be some reason to doubt that lack of moisture, within practical limits, has any particular effect in this direction.

The membranes of the throat and nose are kept moist by the secretions from certain glands provided for this purpose and not by the moisture in the air which we inhale. Of course the dryer the air the greater will be the tax upon these glands, but the surfaces themselves will remain moist so long as the function of the glands is not overtaxed. It seems more likely that the sensation of smarting in the throat and nose, which is often experienced in a dry atmosphere, is due to dust rather than a low degree of humidity.

While dry air does not necessarily contain more dust than moist air, a low humidity tends to extract moisture from the floors, furniture, and other objects and thus liberates a certain amount of dust which is readily picked up by the moving air. It is probable that one of the most important beneficial effects of outdoor sleeping is breathing a comparatively dust-free air. The relative humidity is higher at night and the amount of dust in the air consequently low.

The most extensive investigations in both theoretical and practical ventilation are being carried out in the

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United States by the Chicago Commission on Ventilation and the New York State Commission on Ventilation.

The former was organised in February 1910, and has done a large amount of practical work along the line of ventilation as related to schools, churches, theatres, industrial buildings of various kinds, and street cars. The work is carried on partly in laboratories, especially equipped for this purpose, and partly in buildings in actual operation, where tests are conducted under practical working conditions.

The New York Commission was organised in June 1913, and began its actual work in December of the same year.

The phases of the problem which have been given special study may be classified as follows:—

Chemistry of the Air—Oxygen, carbon dioxide, organic matter, odours, ozone.

Air Conditioning—Temperature, humidity, dust.

Mechanics of Ventilation—Air volume, air movement, heating of air, cooling, recirculation, natural and artificial ventilation.

Efficiency of installation and operation. Ventilating apparatus.

The laboratory is equipped with a ventilation chamber having a capacity of 1,150 cubic feet, which is provided with apparatus by which the air of the chamber may be confined and rebreathed, or renewed at any desired rate, may be maintained at any desired temperature and humidity, may be kept quiet or in motion, may be removed, washed and recirculated, and may be given any desired chemical composition.

In this chamber from one to six persons may be confined for any length of time. On certain days they may engage in definite mental tasks, while on other days they perform a definite amount of physical work under a given combination of air conditions. By the quantitative study of a considerable number of bodily functions, such as temperature, sensitiveness of the skin, blood-pressure and pulse rate, respiratory exchange, the production of heat, duration of digestion, various changes in the urine, &c., an endeavour is being made to learn in what respects, if any, the physical and mental efficiency are altered by changes in air conditions.

In addition to laboratory investigations, outside work is being carried on under the direction of members of the laboratory staff.

Both the Chicago and New York Commissions have been very conservative in giving out conclusions, it being the policy of those in charge to thoroughly investigate the various problems from all sides before making any definite recommendations.

THE METRIC SYSTEM IN ITS RELATION TO THE SURVEYORS' PROFESSION.—II.

By Lieut. A. J. MARTIN (Fellow).

THE INTERNATIONAL SYSTEM.

THE fundamental unit, or primary standard, is the *meter*.* It is of such a length that, for all practical purposes, it may be taken as equal to the ten-millionth part of the arc of the meridian extending from the Equator to the Pole. It is certainly sufficiently near that value to be convenient in calculations relating to terrestrial distances both on land and sea. The Parisian man, or even child, when asked the distance, for example, from Paris to Timbuctoo, or to French Cochin-China, is taught to picture those places on a globe, and can thus easily compute the respective distances. The British man and child have no such easy system in their minds with which to judge great terrestrial distances. And we must remember that we belong to a map-making profession, and that by international agreement our parish and town maps, and our large terrestrial surveys of the Empire and the world, are drawn to the International scale. To this I will refer again later.

* In this Paper and elsewhere the Anglo-American spelling and pronunciation are adopted.

The meter has decimal multiples and submultiples, the former being denoted by Greek prefixes, with the hard "k," and the latter being denoted by Latin prefixes, with the soft-sounding "c," excepting that there is no "c" in the soft-sounding prefix "*mille*." The Greek and Latin prefixes are numerical, and are used also for the weights and measures of capacity.

A little practice in handling the actual measures and weights soon teaches us their inter-relationship as follows (gradations being in 1,000's):—

1 cubic millimeter of water weighs 1 milligram.

1 cubic centimeter of water weighs 1 gram and measures 1 milliliter.

1 cubic decimeter of water weighs 1 kilogram and measures 1 liter.

1 cubic meter of water weighs 1 ton and measures 1 kiloliter.

By the time one has mastered this short table he practically knows the International system of measures and weights. Such a grand and simple system annihilates compound arithmetic. It is its very simplicity which has probably handicapped its progress with us. It is understood in a few minutes, against months to learn our own tables, but we have the actual units of the latter to handle. The point is, no one has tried to teach how we can pass from our present muddle to a new system, all relying in this matter on the Government.

It is idle to urge, as some have done, that the inter-relationship of the measures of length, weights, &c., is only useful when we are dealing with water. Where we use our brain tissues and are still liable to errors the foreigner uses his hand and the slide-rule, and is more likely to be correct in his calculations.

But let us look for one moment beyond the use of such a system to land surveyors, and realise the importance it would be to the nation which is desirous of, and whose very life depends upon maintaining, the largest mercantile marine in the world.

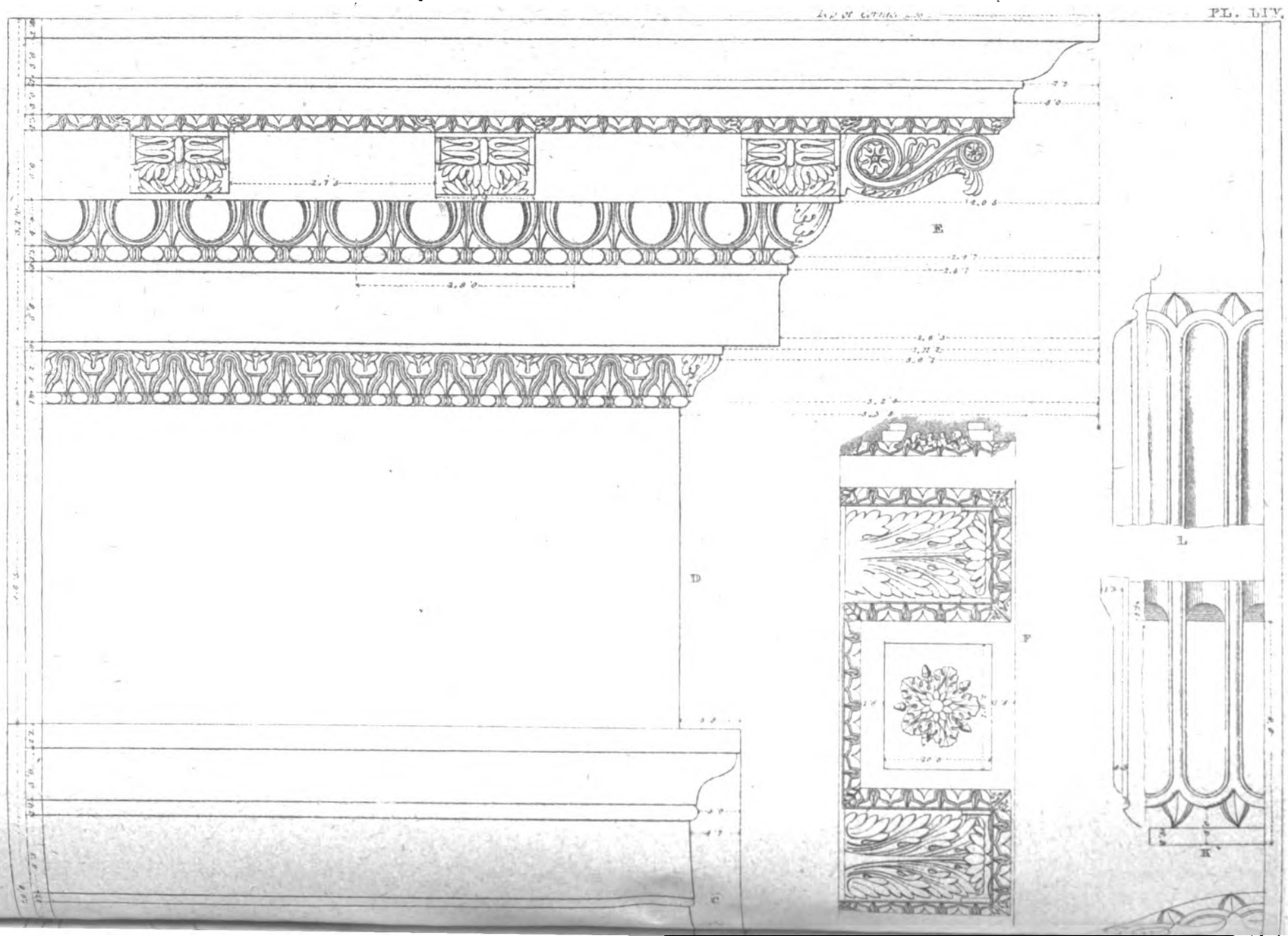
If it becomes necessary for us to be and remain a nation organised for war, then the forester and the farm labourer from the country estate, the bricklayer, the ironworker from the foundry, and so on, must be readily fitted from the knowledge gained in their own callings to take their places, immediately and side by side, in docks or at the railhead, or in loading (not overloading or underloading) A.S.C. waggons in a desert.

In the past our forefathers were ready to lay aside their ordinary avocations and become soldiers. To-day, and even more so in the future, if we are to follow in their steps, we must adopt more scientific methods in all phases and departments of life; our measures and weights, for instance, must be adapted to all phases of industry, and not merely to this or that particular trade or profession.

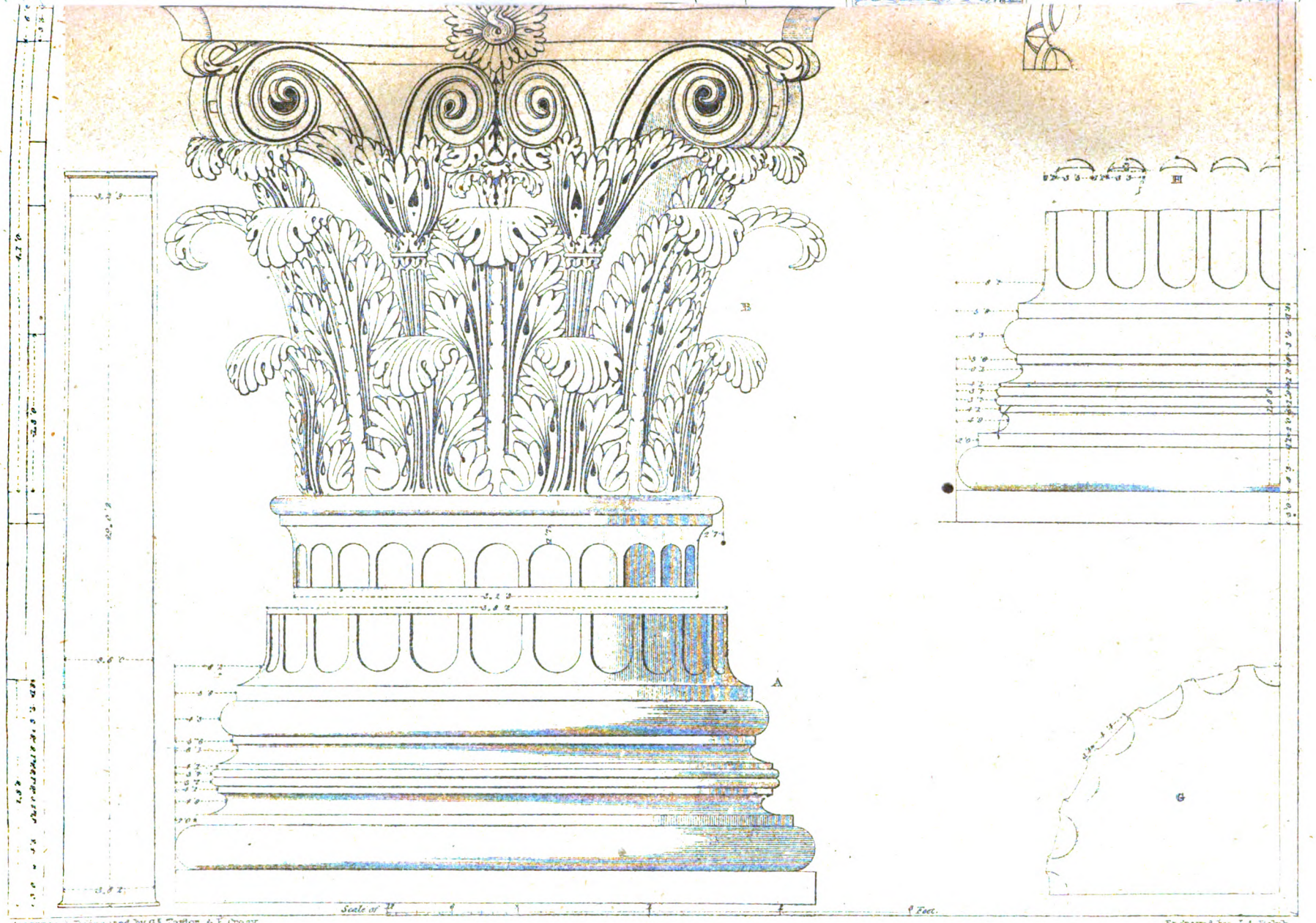
From the forest, the field, the builder's yard and the foundry let us turn to the man in an office, first in civil and then in army life. He has to work out, for example, what 5 tons 11 cwt. 3 qrs. 23 lb. would cost at £5 11*s.* 6*d.* per ton. If we had a decimal system the sum could be done by logarithmic tables, or by a calculating machine by placing 5.5977 (equivalent of tons, cwt., &c.) on the machine, and by 22 turns of the handle, multiplying it by 5.575 (the equivalent of £ *s. d.*); answer, £31.207 (or, say, £31 2 florins 7 farthings). I have seen this sum done on a machine in 10 seconds, and the answer did not require checking, as the machine would break down before giving a wrong answer. But even by logarithms the saving is 73 figures, besides time and brain fatigue, and the answer is more likely to be correct. And the poor clerk, in order that the shipper may compete with his foreign rival, has to take less salary. But give the British clerk a decimal system and machine, and he will be able to compete with all rivals, just as he has been able to do so on the battlefield. Further, in time of war he would in the office, stores, docks or depôt be talking the same commercial language as the forester, farm labourer, ironworker, and others.

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INTERIOR OF THE PANTHEON, ROME.

Details of the Order &c.

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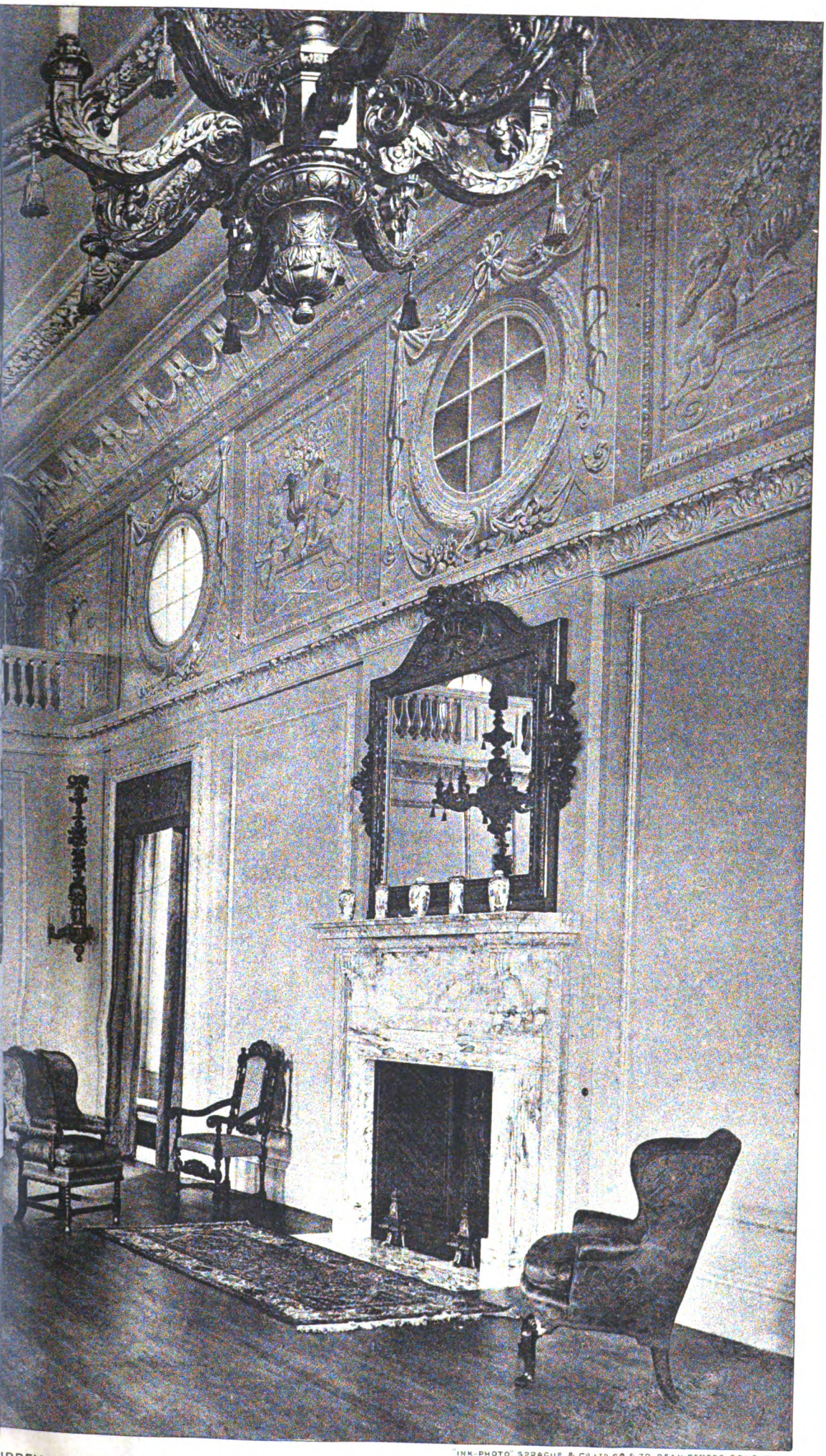
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"ARDENRUN PLACE," LIN[illegible] SURREY.
MR. ERNEST [illegible], ARCH[illegible]
ROYAL [illegible]

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URREY. MUSIC ROOM.

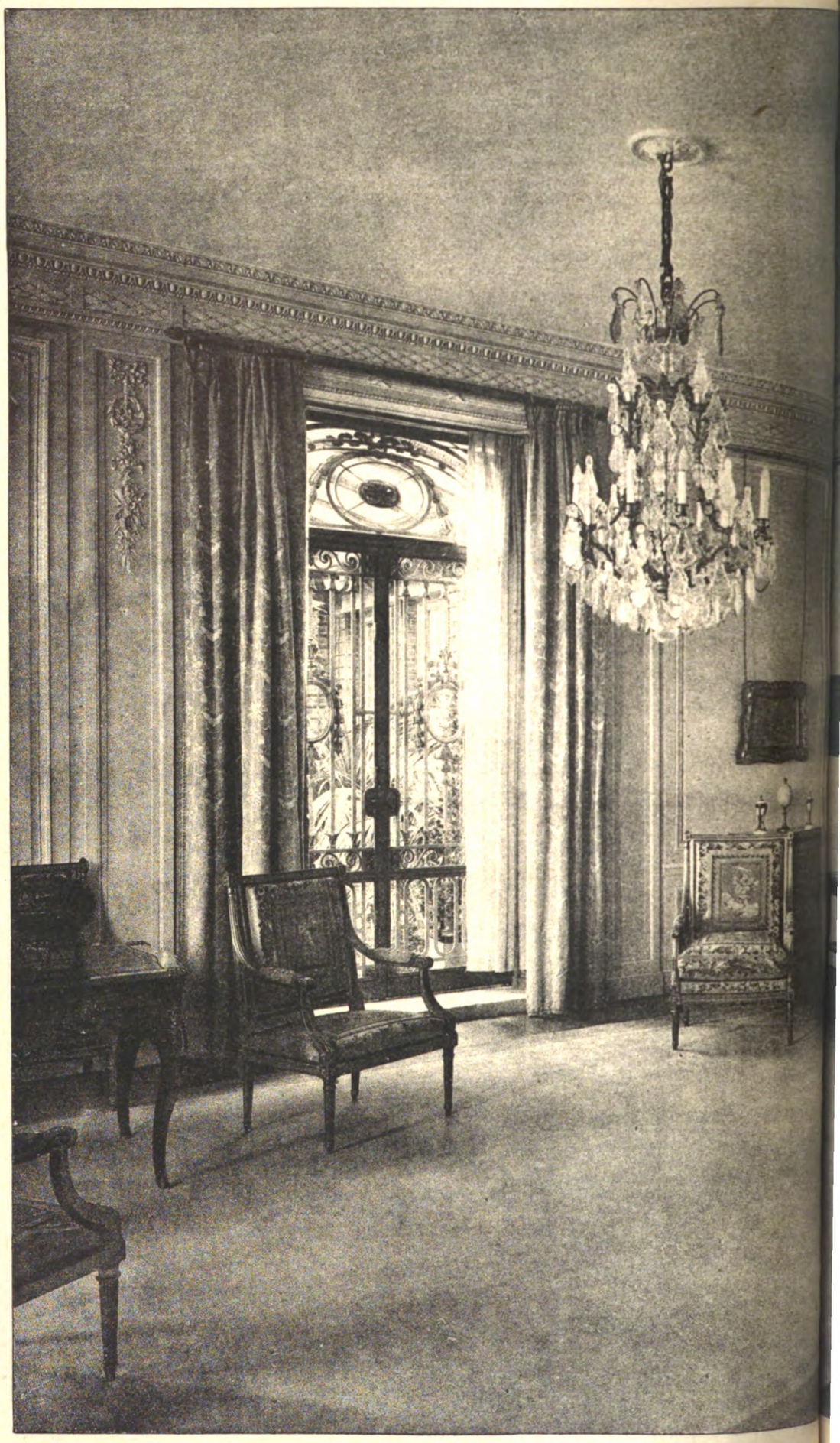
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MR. ERNEST
ROYAL

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REY. **DRAWING ROOM.**

ARCHITECT.

18

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In addition, too, we should have one general rule for measures, weights, and perhaps money, namely, to add up the columns and carry forward the tens, following the method used in adding up ordinary units, tens, and hundreds, "simple" addition as we called it at school, instead of having all sorts of factors to divide by before carrying forward.

Rainfall provides another useful illustration in arithmetic. Supposing 23 millimeters of rain have fallen then a metrician knows, straight away, that 230 tons weight, or 230 kiloliters' measure, have fallen per square hektometer. It may represent so much manurial value to the crops, or so much water to the ponds, or so much water to pass through the surface water drains.

Again, if we are told that the barometer has fallen 1 inch, equal to a reduction in the weight of air of half a pound per square inch, we do not realise that the crops have been affected by the sudden removal from off them of 1,400 tons weight per acre. But when we have accustomed ourselves to the International system the calculation would be so easy that the mind would readily pass on to it.

THE PRACTICE OF LAND SURVEYORS.

As no working system is before the world other than the International it is the only system we can now discuss, and I wish my Paper could have been started at this point and been entitled, "Surveyors and the International System of Measures and Weights."

First let us see what the practice of surveyors has been in the past.

The land surveyor's chain of 22 yards is divided centesimally into 100 units, each of 7.92 inches; it was introduced by Edward Gunter in 1620, but only authorised by Order in Council on June 27, 1876. For levelling, that is to say, for our vertical work, we surveyors use the centesimal part of the foot. These usages, some of 300 years' standing, and the fact that in towns we use a chain of 100 feet, demonstrate that surveyors have always preferred to work with a decimal system, and we must admit that even our partial adoption of some method of tens has helped us immensely. But it would help us, in many calculations that we now cannot even dream of, if our lineal measures were decimal and our square measures centesimal instead of the reverse being the case. Thus the side of an acre is the square root of 10 square chains, or of 100,000 square links, and the square roots of these figures is not a whole number in either case.

The following examples further illustrate the inconvenience of the present units used by surveyors:—

A fall of 8 feet per mile is 1 in 660, which requires quite a mental effort.

A fall of 1 in 600 is 1 foot in 9.09 chains—rather appalling figures.

1,597 inches equals 2 chains 0 yards 1 foot 1 inch, but no association of ideas carries the mind from one set of figures to the other, whereas it is seen at a glance that their metric equivalent of 40,564 millimeters is also 40m. 564mm.

Although the centesimal foot has certain advantages, it is a pity our horizontal and vertical measures and scales should not have a common basis.

There are no square furlongs and no lineal roods.

The side of a square-shaped acre is about 208¾ feet.

If the International system is adopted by us we could have a chain of 20 meters in length (equal to 21.87 yards instead of the 22 yards), divided into 200 links of 1 decimeter, or 100 links of the double-decimeter (equal to 7.87 inches against 7.92 inches in the link), and probably we should carry 5 pins instead of 10; and for levelling we should use the centimeter (equal to 0.39 inches) instead of the 1-100th of a foot (0.15 inch), the former being a much more convenient unit for the sight, as the sample levelling staffs show. The centimeter levelling staff has been made in this country for many years for exporting to foreign countries and to some of the Oversea Dominions.

Thus our land surveying and levelling units could be metric throughout, and agree with the units of length to be used in all other trades and professions.

Land surveying brings us to the question of our Ordnance maps. Our original Ordnance survey is known as the "parish map," the 1.2500 as some call it, as it is to the scale of 1 meter to 2,500 meters, or expressed in another way, 4 decimeters to the kilometer. And the new town maps are to the scale of 1.500, or 2 meters to the kilometer. These scales were decided upon at the International Statistical Conference held at Brussels in September, 1853.

Yet what do we do? We do not even show an International scale on our maps, but only the reference fraction 1.2500, which the foreigner at once recognises as metric. But we indiscriminately—criminally I nearly wrote—describe them as to the scale of either—

Parish map (*a*) 1 inch to 3.156 chains; (*b*) 1 inch to 208.3 feet; (*c*) 1 inch to .0395 mile; or (*d*) 25.344 inches to 1 mile.

New town map (*a*) 1 inch to 41.66 feet; (*b*) 126.72 inches to 1 mile; or (*c*) 10.56 feet to 1 mile;

and then, as though still further to hide the fact from the British people that the maps are really metric, we have the "sheet lines" (to use a technical expression for the length which the sides of the map represent) to British denominations.

Messrs. Stanford have prepared for me the maps pinned up on the blackboard. They are made from the parish and new town maps of a naval base, and show plainly that our original Ordnance maps are metric, and how the sheet lines could be adjusted to metric measures if desired. I chose this example of a naval base years ago as a warning, and since writing the draft of this Paper I have heard that that naval base has been bombed. How easy when the flights are by kilometers and the maps of the land below are in kilometers, and when we surveyed the land for the enemy and plotted them to their scale, which we have so far not adopted for ourselves! If a foreign army were landed in this country all the sightings of the enemy's big guns, rifles, &c., would be to the same system of measures as our maps. But with us they would be different, and the scales on our maps are so complicated that, in our own country and with our own maps, we shall be more liable to errors regarding distances than the enemy would be. And yet the primary object of our maps was for military purposes, as the name "ordnance" indicates.

The parish and new town maps are photographed down to smaller scales, by complicated mathematical calculations, to the scales of 6 inches to 1 mile, 1 inch to 1 mile, and so on, until almost all trace and remembrance of the International system is obliterated and forgotten by the British, but not by the enemy.

It should be noted that scales such as 10 inches or 10 feet to 1 mile are not decimal scales, as the inch and foot are not decimally related to the mile. A decimal scale is 1 of any unit to 10, 100, 250, &c., of the same unit, and such a scale makes it possible to use the map to any unit whatever of any country.

Further, we have had the full use in this war of the maps, for example, of France and Belgium to international scale. What have we done with them? Drawn lines across them showing blocks of one square mile and decimal divisions of the mile (1,760 "yards"), and so on. Yet the reports come to hand, "We have advanced *x* 'meters' on a frontage of *y* 'kilometers.'" The plain business man would describe all this confusion as a muddle. Are our guns sighted to fit in with decimal divisions of a mile or to chains? No, but in 100's and 1,000's of yards. And yet an approximate 10 per cent. change of the old sights would have given meters (all sights of new guns could have been made metric), and we should not have had to waste time altering the French and Belgian maps.

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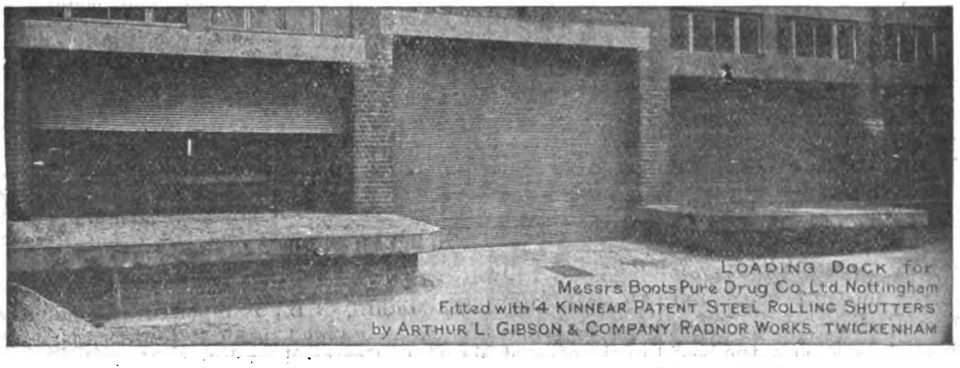
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Another question may be asked. If all our principal Ordnance maps are really metric, how could we show the areas thereon in metric denominations? Once more the answer is simple. Present areas are shown in acres and decimal parts; printed conversion tables could be issued as in the old days, when land agents troubled to convert decimal parts of acres to roods and poles, and on all re-issues of the sheets the metric areas would be inserted instead, and metric scales shown on the maps. In the meantime an approximate rule would be to multiply acres by 2 and divide by 5, or multiply by 4 and point off one place to bring to hektars. Tenants of estates would perhaps receive from their landlords revised schedules of their lands, and when wishing to grub up hedges, &c., so as to make their fields more suitable for motor ploughing, would, where just convenient, replant new boundaries so that convenient metric areas were enclosed.

Contour Lines.—The contour lines on our maps are generally shown at intervals of 50 feet, 100 feet, or 200 feet, equal in meters to 15.24, 30.48, and 60.96. These intervals do not affect our commerce, farm work, &c., and therefore this is less important, but I suggest that when the maps are revised, by rotation which occurs about every twenty years normally, intervals of 25 and 50 meters should be used. The contour lines are mostly sketched on by experts, all of whom could just as readily sketch on the new intervals; in fact, surveyors or the military could generally calculate for themselves from the existing lines where the metric intervals come. These vertical intervals are important for artillery and machine-gun work, and we may rest assured that the Germans have placed such vertical intervals on our metric maps for their use if occasion arises.

Spot levels could, of course, easily be altered.

Timber.—Measuring for round timber would be done by the same formula as now, but the quarter-girth would be taken in centimeters instead of inches and fractions, and the length in decimeters instead of feet and inches, and the result divided by 100 would give cubic decimeters instead of cubic feet. Knowing the specific gravity of any particular timber (and they would be given on our measuring poles or in our new "Hoppus"), the contents of a tree could be readily expressed in kilograms or parts of tons also. Under-wood would be calculated by the cubic meter or short hundreds (five-score). Hewn imported timber is generally to metric dimensions, although we take near imperial equivalents and work laboriously with them.

Hay and Straw Stacks.—The weights are now calculated by estimating the weight of a cubic foot or cubic yard, and would be measured up into cubic meters, the weight of a cubic meter being the unit to be estimated, conversion tables being used until those concerned were accustomed to the new unit. A few might prefer the method of estimating what height a ton would be, the base of which was 1 square meter, but hay and straw being so light, I have not shown any height on the arm of the model.

Two trusses of hay and three of straw would go to the centner, and forty and sixty trusses respectively to the metric ton. The new system would not interfere with the stackman's method of cutting by measurement, but if 100 lb. avoirdupois were adopted for the hundred-weight it would interfere with the cutting.

Corn.—Quite apart from what system of measures and weights we adopt, unless corn in the sack is sold by weight only, or by measure only, there will always be the four methods of sale by weight, measure, measured weight, and weighed measure (see Parliamentary Paper 279, of 1892, entitled "Corn Sales"). Probably the best method under the International system is to sell all quantities above, say, 10 kilograms at per 50 kilograms (sometimes known as a centner or 100 International pounds). Reasons have already been given for not adopting the 100 avoirdupois pounds. If all Government returns were published in weight only, anyone could readily ascertain the fair price of the loaf. But should it be desired to retain the system of measure by weight, then convenient statutory hektoliters for wheat, barley, and oats would probably be respectively fixed at 150, 125, and 100 half-kilos or International pounds. My own opinion is that the farmer would always be thankful for the adoption of the metric system if for no other reason than that its introduction would be the means of simplifying the methods of converting produce into money. At present there are at least 200 different standards for the sale of agricultural produce.

Tithe Rent-charge.—Some years ago I experimented with these convenient figures for wheat, barley, and oats, and found that they would not affect the average value of tithe rent-charge for the years 1835 to 1905 to any appreciable amount; in fact, if Norfolk malting barley were sold by weight any small difference would be neutralised. The question is only of interest to the few experts who have the fixing of the annual value of a £100 tithe rent-charge; but should anyone wish to go further into the question I would refer him to the Parliamentary Paper on "Corn Sales" and to pages 148 to 150 of "Martin's Tables" already mentioned. The particulars there given show that one of the most complicated of all questions has an easy solution in figures easily retained in one's mind.

(To be concluded.)

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Architectural Association Red Cross Detachment (London 43rd).—Volunteer Field Ambulance Unit.

SIR,—May I appeal once more through your columns for recruits for our Red Cross Detachment? We are now raising a body of men for a Volunteer Field Ambulance Unit, which will be on the same footing as other branches of the Volunteer Force. Its services will be utilised in case of national emergency, and in the meantime its members will receive training by medical officers in first-aid and field ambulance work generally. A free issue of uniform and kit will be made immediately the Unit is at full strength.

Men of all ages in Grades 2 and 3 are eligible for enrolment provided they have been exempted from military service, and it should be noted that men granted exemption by tribunal conditional upon their joining the Volunteer Force will satisfy this requirement (if they are graded 2 or 3) by joining the Volunteer Field Ambulance Unit. All those wishing to respond to this appeal are requested to communicate with me at the Architectural Association, 35 Bedford Square, W.C. 1.—I am, Sir, yours, &c.,

F. R. YERBURY, Quartermaster.

35 Bedford Square, London, W.C. 1:
July 6, 1918.

THE Goldthorpe parish church is promoting the erection of a parish hall as a war memorial.

WITH reference to our paragraph in last week's issue of the American hospital, Sarisbury Court, Southampton, the architect is Mr. Arnold Thorneley, F.R.I.B.A., of Royal Liver Buildings, Liverpool.

SECOND-LIEUTENANT J. E. FARWELL, D.L.I., son of Mr. Farwell, Denbeath, Methill, N.B., is reported as wounded and missing. Lieutenant Farwell, prior to joining up, was in the office of Mr. G. C. Campbell, architect, Methill.

THE Minister of Munitions has issued an Order dated June 28 increasing the maximum prices of lead fixed by the Order of September 1, 1917. Sheet lead is raised from £39 10s. to £41 per ton; lead pipe from £40 to £41 10s. per ton; dry white lead from £46 to £51 per ton; white lead in oil from £53 to £58 per ton for amounts of five cwt. and over, and from £55 to £60 per ton for amounts less than five cwt.; and red lead and litharge from £42 to £45 per ton

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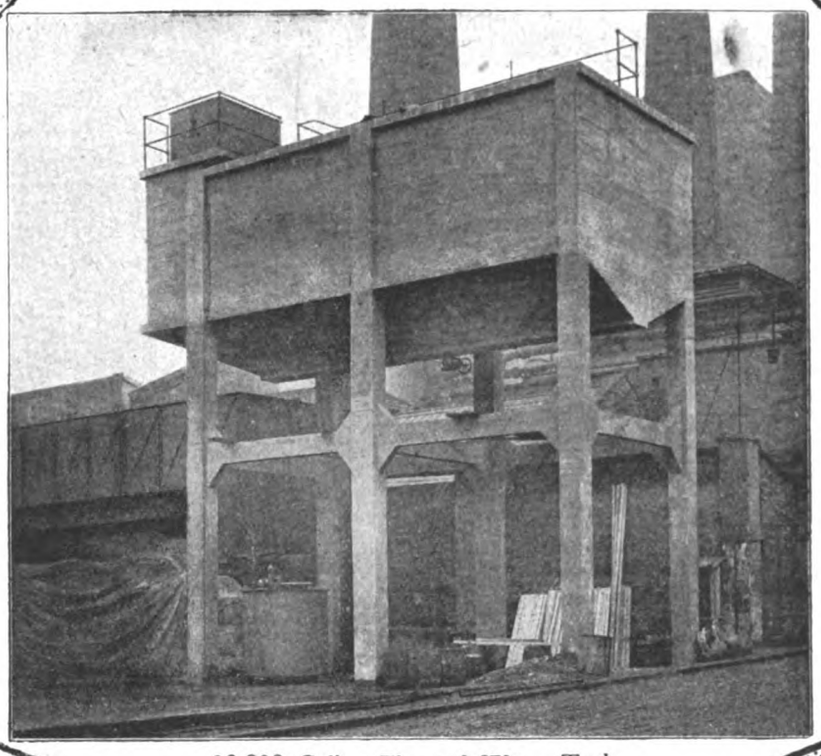
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FORTHCOMING EVENTS.

Friday, July 19.

Great Northern Central Hospital. Lecture for Wounded and Convalescent Soldiers, at 8 P.M., "The After-Care of Discharged and Disabled Soldiers and Sailors," with lantern slides, by Mr. F. Hammond, F.R.I.B.A.

Tuesday, July 30, and Wednesday, July 31.

Half-yearly Meeting of the National Federation of Building Trade Employers of Great Britain and Ireland, at 10.30 A.M., at the Grand Hotel, Colmore Row, Birmingham.

THE MEMORANDUM OF THE ADVISORY HOUSING PANEL OF THE MINISTRY OF RECONSTRUCTION.

THIS Memorandum of six members of the Reconstruction Committee upon the Housing Problem, as it is likely to present itself at the close of the war, was published on June 7, 1918. It contains some valuable statistics as to the urgency of the housing problem even before the war; and those statistics prove that our present difficulties have been greatly aggravated by the cessation in building which was caused by that unwise legislation which we discussed in our issue of July 5. It admits that in the past "about 95 per cent. of houses have been built by private enterprise in the form of speculative building"; and it accepts the principle "that no obstacles shall be put in the way of the free working of private enterprise in the future, subject only to its conforming to a sufficient standard of design and arrangement, internal and external, of the houses to be built." We have always advocated this principle, for we think that its adoption would do more than anything else to solve this problem. We think that if private enterprise were assisted by loans from the State at the market rate of interest, private enterprise would go a long way to solve the problem.

The question whether or not this opinion is correct is not discussed by this Memorandum. Its signatories state that, as a separate Memorandum on this subject is being prepared, they do not propose to discuss its possibilities. But, having thus burked the discussion on the possibilities of private enterprise, they proceed to lay it down dogmatically that, "in spite of every encouragement which the State can give, private enterprise cannot, in view of the circumstances which will exist at the end of the war, be relied upon for any large contribution." But then they go on and state that "this does not mean that private firms will have no share in the work which has to be carried out; their assistance will certainly be required, and they should be fully employed as building contractors." But if private enterprise is to be called upon to supply the brains and the capital needed for the actual building operations, why cannot it be also relied upon to supply the brains and the capital for planning the houses which are to be built? Apparently private enterprise is good enough to supply the material for building, but it "cannot be relied on for any large contribution" to the housing problem. This is a pretty paradox; but paradoxes of this kind, though well enough in academic essays, are likely to work lasting harm if they are made the basis of actual legislation. And this particular paradox is, in fact, the basis of a far-reaching and expensive proposal to entrust the solution of the housing problem to the efforts of a central authority working through the local authorities.

The scheme proposed is contained in paragraph 21 of the Memorandum. We quote it verbatim:—

(*a*) That the State should provide the whole cost of the building and should own the houses for a period to be fixed, say five years, at the end of which prices may be expected to have attained a normal level. This period is referred to as the transitional period

(*b*) During this period the local authority will act as agents of the State, and will be responsible, subject to the approval of the District Commissioner hereafter described, for building and managing the houses and collecting the rents.

(*c*) At the end of the transitional period the ownership of the houses will be transferred to the local authorities at a figure to be arrived at by deducting from the original cost such a percentage as represents the fall in price of materials and labour together with the fair allowance for depreciation.

(*d*) During the transitional period the rents, collected by the local authorities as agents, will be paid over to the State. In urban districts the aim should be to fix rents at a figure likely to provide a fair interest, sinking fund, &c., when normal conditions are restored and the abnormal cost has been written off. In rural districts the rents should be fixed in consultation with the Agricultural Wages Board, and in co-operation with that body raised by stages to a similar figure, which should be reached by the end of the transitional period.

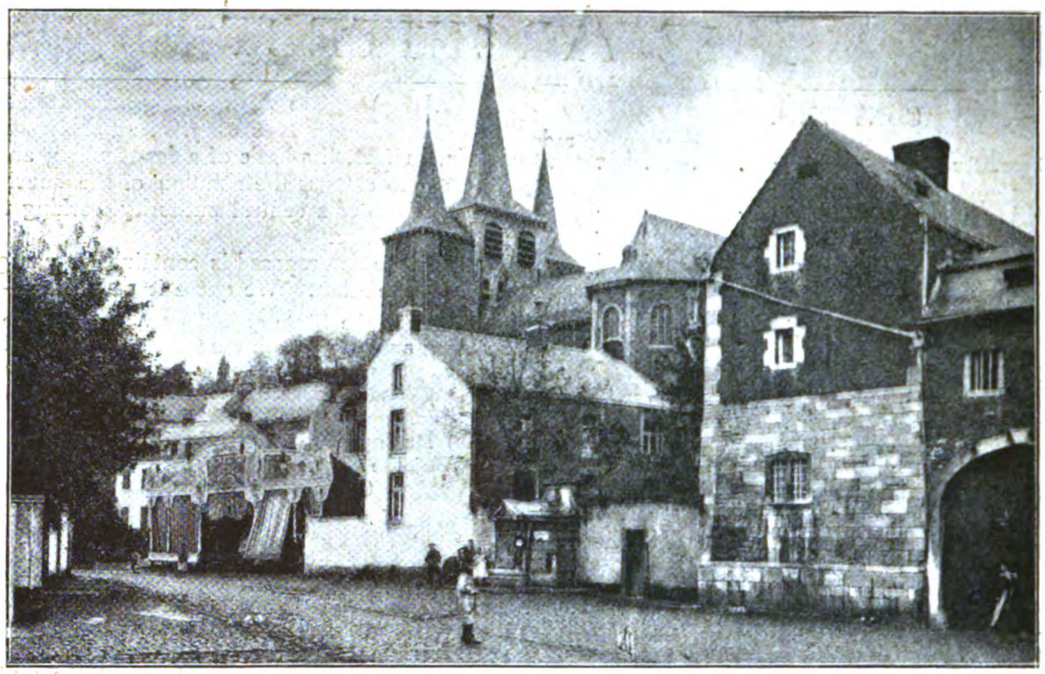
(*e*) Upon the transfer at the end of the transitional period, it should be incumbent upon the local authorities to secure, as far as may be practicable, rents sufficient to cover the annual charges.

(*f*) It will be clearly impossible to forecast accurately the date when, conditions having become normal, the transitional period may be equitably considered to be concluded. It may be desirable, therefore, to give power to the Government of the day to postpone by order the date of the transfer of ownership in any district where circumstance might require it.

The signatories of the Memorandum admit that this scheme "will no doubt cast the most heavy burden on the Exchequer"—indeed, it is admitted that its cost for England alone will be something like £25,000,000. In addition we have to reckon the cost of running this central department, the cost of the District Commissioners, the cost to the local authorities of managing during the transitional period this new property of the State's, and the cost to those same authorities of managing what, after the transitional period, will be their own property. It is clear that this last item of cost will be a burden upon the rates which will not only be permanent, but also of increasing weight as the houses grow older. Even if the management of the local authorities was skilful it would be difficult to show any great profit. And we may fairly question the likelihood of getting skilful management from authorities whose members do not individually lose much if the management is bad, who do not gain much if the management is good, whose patronage will be vastly increased by this new task, who are dependent on the votes of those who will inhabit and those who will repair this property.

It is clear that the adoption of such a scheme as this would mean that governmental authorities, central and local, would, at great cost to the public, obtain a great and a permanent hold on the building trade. Apart from all question of cost, this fact decisively damns it. We say this, not because we are individualists of the old anarchic type which led to the disastrous fallacies of the old-fashioned free trade, but because we think that there is a place both for individual effort and for State action, and that this scheme denies to individual effort

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AMAY.—THE CHURCH, SHOWING THE TRIPLE SPIRE.

its proper place. We are no advocates of the old one-sided free trade which deprived our industry and commerce of any sort of intelligent organisation, and left it in that condition to face the scientifically organised German competition—an undisciplined mob against a disciplined army. But we must admit that our one-sided free trade had one merit. It did encourage individual initiative. It did protect our trade from the paralysing effect of control by opinionative and ignorant Government Departments. No doubt during the war centralised control by Government Departments is necessary; but we think that experience of the quality of that control has convinced most traders that the sooner it is safe to relax that control the better it will be for the trade. Our trade is not, and cannot be, conducted as German trade, because we fortunately are not Germans. German trade has been created by, in, and through the central government; it has been animated by a patriotic ideal—Deutsche über Alles—and it has thereby succeeded remarkably well in combining the advantages of individual initiative and central control. Our trade, like our Empire, has been the product of individual initiative. Our Central Government has left it to itself, accepting gratefully, as a labour-saving device, the gospel of *Laissez-faire;* and it has never even tried to inculcate into the nation the patriotic ideal of doing good work for the sake of the nation as a whole. It has never tried to understand British trade as a whole, or the problems of individual branches of British trade; and consequently its control of trade has always been irritating and stupid, because, just as a second-rate lawyer is always the lawyer who delights in obscure technicalities, so an ignorant Government Department always endeavours to screen its ignorance under multitudinous forms and mazes of red tape. All branches of industry and commerce will be carried on under new conditions after the war; but we think that it will take many years of trade under these new conditions before a Department of the Central Government will be sufficiently educated to guide any branch of trade intelligently. It would, in our opinion, be madness to trust the solution of a problem so urgent as the housing problem to such a Department immediately after the war.

Of the urgency of the problem this Memorandum supplies abundant evidence. It is there stated that:—

> It is estimated that the shortage due to cessation of building during the war will amount by the end of 1917 to 175,000 houses. The normal annual increase in this class of house is 75,000. In order, therefore, to make up the deficiency caused by the cessation of building during the war, it would be necessary if the war were to end in 1917 to build 250,000 houses in the year 1918, and an additional 75,000 will be needed for each year following through which the war is continued. But in addition to this number it is considered that an effort must be made to satisfy part of the special need of the rural districts. With this object 50,000 houses should be built in rural districts over and above what may be considered their share of the 250,000. The resulting total of houses to be built in 1918 is 300,000. It is not suggested that this approaches the full need of either urban or rural districts, but it is given as a figure representing the lowest limit of what should be our endeavour.

Mr. Leslie Scott's estimate is considerably higher; and he gives good grounds for his view. In our opinion the problem will be far more cheaply solved if the State would grant loans at market rates of interest to individual builders of good standing, who would, in return, undertake to erect houses according to plans which were drawn up by local authorities in touch with local needs and conditions, and approved by the Local Government Board. In that way a high standard of design and lay-out would be secured, while the provisions of the Building Acts would secure that the houses were well built. Probably such a scheme as this would meet the needs of urban districts. But it is said, probably with some truth, that it would not meet the needs of rural districts, because, in spite of the increase of labourers' wages, it will be impossible to exact a rent which will repay the cost of building. In such cases, it seems to us, the remedy is not to hand over the building to the State, but to make a grant to the builder in cases where the necessity is proved. The State must pay for its neglect of agriculture. It has admitted this principle by passing the Corn Production Act of 1917; and it must apply the same principle to the housing of the men who produce the corn.

We shall await with interest the promised Memorandum on the possibility of encouraging private enterprise, for we are persuaded that it is this way that salvation lies.

An imposing national South African war memorial is contemplated, and to defray the expense of preparing designs Mr. Ernest Oppenheimer has given a cheque for £2,000 to General Smuts to defray the expenses of such preparation. A suitable site is suggested as Meintje's Kop, Pretoria. General Smuts has secured the services of Mr. Tweed, the sculptor, who is to proceed to France to make sketches of South Africans serving in the war.

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AMAY.—THE CHURCH, SHOWING THE TRIPLE SPIRE.

ILLUSTRATIONS.

"ARDENRUN PLACE," LINGFIELD, SURREY.—STAIRCASE AND DINING ROOM.

(See Illustrations, July 5 and 12.)

THE staircase and panelling are all constructed of figured Italian walnut. The carved panels of the balustrade are in lime, and are the work of Messrs. Aumonier, who also did the whole of the rest of the carving in the hall and on the staircase. The dining room panelling is of deal, painted a delicate grey green with the enrichments gilded. The whole work generally was carried out by Messrs. Trollope & Sons and Colls & Sons, of 1 Pall Mall East, S.W.1, who also built the house and carried out the whole of the garden work.

We publish a view of the exterior, showing the work carried out by Mr. Ernest Newton, A.R.A.

LECTERN, CHURCH OF SS. MARY AND CHAD, LONGTON, STAFFS.

THIS has been presented to the church by Messrs. Tompkinson & Bettelley, of Longton, who were general contractors for the completion of the church (illustrated in "The Architect," September 1, 1911), and has been executed by them from the architect's design.

THE PANTHEON, ROME.

THIS illustration is No. LV. from Taylor & Cresy's "Rome."

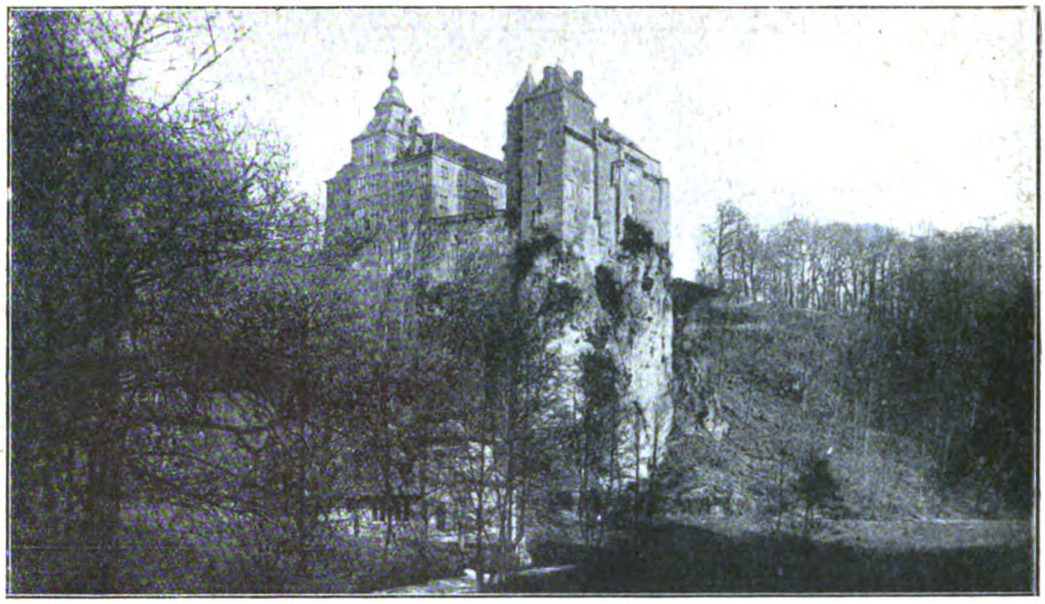
NOTES AND COMMENTS.

THE last issue of the "Saturday Review" states: "The erection of a Government factory, a munition works, or depôt utterly demoralises the whole neighbourhood, as may be seen in the case of Cippenham. The rate of wages for the agricultural labourer has been fixed at 30*s.* a week. The moment Government works appear, wages of £3 or £4 a week are recklessly offered by the officials for any sort of labour. The consequence is the farmer cannot keep his labour, and the production of food suffers accordingly. A gentleman was walking in the neighbourhood of the Cippenham depôt when he saw two bicycles resting against the hedge, their two owners lying smoking in the ditch. On questioning them, he learned that they had been taken on at the Cippenham job at £3 a week, but as there was nothing for them to do they had been told to go away and hide themselves! This story is literally true." The whole question of wages at the present time should receive attention and revision. There are many cases of over-payment, so that the State has become a dangerous competitor to many industries, and at the close of the war great industrial unrest is to be feared unless the matter is dealt with at once.

We made reference last week to the aircraft strike in these notes. After we had gone to press the news came through of the way in which the Ministry of Munitions had dealt with the subject. The protest against such a proceeding is under the circumstances a very mild one from the London Master Builders' and Aircraft Industries' Association, who have written to Mr. Lloyd George and Mr. Churchill, stating that the Ministry of Munitions has dealt with the London strike in a very unsatisfactory way. "There can be no other opinion formed than that the Ministry has, in effect, censured the firm struck against," says the Secretary, "whereas the true record is that the firm only endeavoured to maintain proper order and procedure in its establishment, which was met with defiance by the man Rock, who has not had the support of the recognised trade unions. My Association is most astonished at such an attitude, having regard to the opinion expressed by the deputation who attended before Mr. Wolfe and Sir Thomas Munro and others on Monday last, when several of my members were present. My Association is also surprised to find Labour being consulted to the exclusion of the Employers' Association, considering the questions were such as involve the whole industry." We admire the moderation expressed in the above communication, and trust that it will lose no effect by the restraint exhibited.

In issuing this small pamphlet "Pitzhanger Manor, Ealing Green" (Soane Museum Publication No. 4), by the Curator of the Soane Museum, Mr. Arthur I. Bolton has made a useful and valuable addition to the literature relating to the life of Sir John Soane, R.A. (1753-1837), who lived at Pitzhanger from 1800-1811. The original house was built by the younger Dance in 1770 for Thomas Gurnell, who became father-in-law to Dance some two years later. Soane was articled to Dance and assisted him on the Mansion House, but we see his hand better in Dover House, Whitehall, built by Henry Holland. Mr. Bolton does not tell us that among Sir John's idiosyncrasies was an uncontrolled, passionate nature, which information the writer elicited from the late Mr. Birch, Curator of the Museum, and the predecessor of Mr. Walter Spiers. The ruins of Pitzhanger have disappeared with subsequent alterations, while recent additions to form the Ealing Library have hardly added to the beauties of the house. There existed not so long since an interesting porch to the kitchen garden with a lattice work gate probably designed by Soane, while the slates on the roof of Dance's portion were of remarkable size and thickness. The publication is most interesting, but we imagine the view of the ceiling shown

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MODAVE.—THE CHATEAU.

on page 16 relates to the room on the first floor over the eating room, and not as described.

We have been asked to call special attention to a letter appearing in our correspondence columns, and most willingly do so, asking for members for the County of London Royal Engineer Volunteers, whose headquarters are in Balderton Street, Oxford Street, W. Important duties have been assigned to the corps, and recruits are very urgently required. Drilling and instruction is given of an evening, and on alternate Saturday afternoons, so that ordinary business is not interfered with. Until efficient fourteen drills each month, after being passed as efficient, ten drills. One hour counts as one drill, two hours two drills, and a day at Esher three drills. The subscription is a very small one, entrance fee 5s., and a quarterly subscription of 5s. Full particulars of the work can be obtained on reference to the pamphlet, which is issued on application. On passing as efficient, uniform and equipment are provided free.

A glance through the columns of our contemporary "The Decorators' Magazine" painfully reminds us that some of our buildings are showing signs of want of attention. A correspondent referring a short time back to a visit to Hastings remarked on the depressing effect of the property along the front of that seaside resort, and made a pertinent suggestion that the Town Council should paint the houses along the front of Hastings and St. Leonards. Judging from the want of paint exhibited at this present time, there should be a very busy time in connection with the paint and painting industry at the close of the war, but in many cases a delay will be dangerous. Money should not be wasted where not required, but at the same time we would remind property owners that at all times prevention is better than cure, and also in the long run the less expensive course.

AMERICAN NOTES.

"THE American Architect" for April 17 contains as frontispiece a view of the façade of the Cathedral of Quimper in Brittany, with a description from the pen of Mr. A. Kingsley Porter. The towers and spires were added in 1854, based upon the original design. We also note with interest that there is included in this issue some photographs and measured drawings of the room from No. 3 Clifford's Inn, now in the Victoria and Albert Museum.

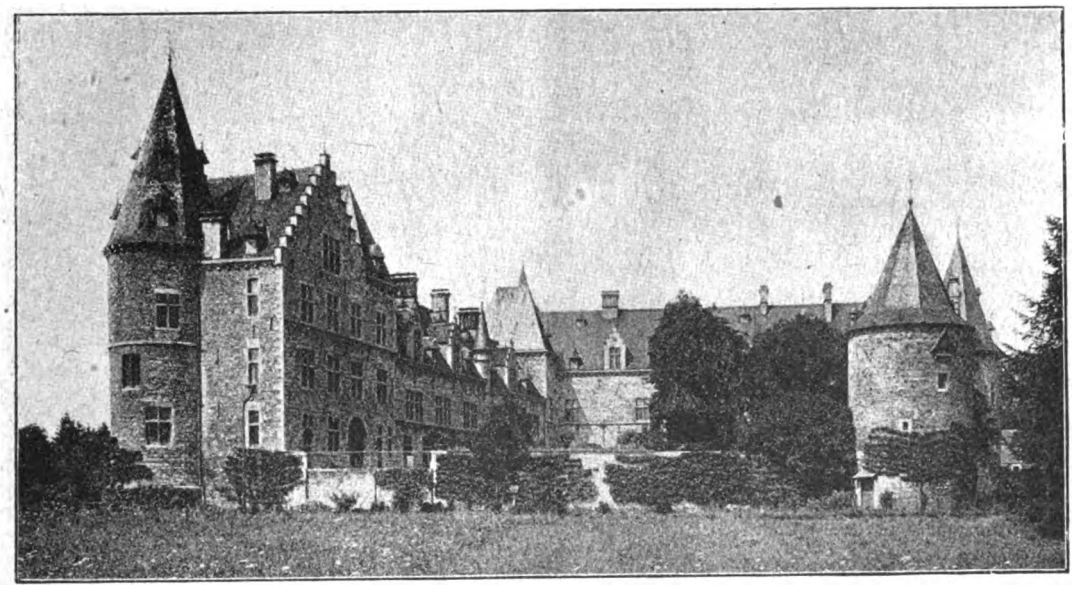
For May 8 the frontispiece presents a portion of t sculptured façade of the Villa Giacomelli, province Treviso, Italy. Among the numerous houses illustrat that of Truxton Beale, San Rafael, California, by Mess Bakewell & Brown, exhibits a fine type of work ba on the late English Georgian era with an element French taste internally. The issue for May 15 gi a view in the garden of the Villa D'Este, Rome (Tivo Italy, and some interesting examples of town planni ig, of which the scheme for Bristol, Pennsylvania, by Messrs. Mann & MacNeile, is one of the most important, providing accommodation for the shipyard workers f the Merchant Shipbuilding Corporation. Americ evidently lining up with the ideals which produced I Sunlight, Letchworth, and Gidea Park in this count The article is written by Mr. C. Stanley Taylor, has given a number of illustrations of the various ty s of buildings arranged at different points upon the site.

In the number for May 22 the garden of Mrs. Arthur Scott Burden, by Mr. John Russell Pope, has a distinct charm, from which we gather our American cousins have solved the art of garden planning. We here note further instances of industrial housing, one from the pen of Mr. Arthur F. Clough, dealing with the system of organising housing schemes, and some particularly artistic designs by W. H. Cox for Danielson, Connecticut.

For May 29 our attention is drawn to an article entitled "Colonial Houses of the Earliest Type," by Mr. Joy Wheeler Dow. Mr. Dow writes well of the weather-boarded and timber-framed houses of Marquette by Lake Superior, and we would not like to quarrel with him for calling an obviously Charles II. type of house a "Jacobean Colonial." This inaccuracy in the definition of English periods is one of the few things with which our cousins are least familiar. We, however, look forward to other articles from his pen, for we like his style. The inevitable sky-scraper shoulders some other interesting photographs of the work of Messrs. Otis & Clark, of Chicago, of their "Cafeterias." Here is a new catch term which may take on here for new restaurants, and lastly a skyscraper at St. Louis depicting some gargoyles worthy of the genius of Mr. Voysey.

On June 5 the issue contains for frontispiece a good view of the well-known Piazza of St. Peter's, Rome, and a very good description of the industrial suburb at Morgan Park, Minn., by Messrs. Dean & Dean, which is evidently designed to house the workers in a very

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FALLAIS.—MEDIÆVAL CASTLE.

legant and æsthetic manner, combined with modern deas of economy and hygiene. On a more restricted site Ir. E. D. Litchfield gives his lay-out of the Yorkship illage for the New York Shipbuilding Corporation. What strikes one so forcibly upon the perusal of these periodials is the absence of churches, so familiar and so continuous in English periodicals, as well as the high grade f execution, design, and planning of the newer American orks.

The issue for June 12 deals with the war and contains an interesting article by Messrs. Edward F. Stevens and Charles Butler, the architects appointed by he Chief of Engineers, United States Army, for hospital onstruction. Messrs. Stevens and Butler state in their eport: "Never before in the history of this country ave there been created great cities in a night, as it were, uch as was witnessed in the erection of the sixteen army cantonments and the sixteen National Guard camps, built between the middle of June and November 1 of last year. Each city houses from 25,000 to 42,000 soldiers. Moreover, with each of these thirty-two cities the Government has supplied a hospital of larger proportions than would be needed for a civilian populatio of the same number. In the cantonments the hospitals will accommodate 1,000 beds each, and in the camps from 500 to 1,000."

With a portable construction for use in France, it was necessary to consider lightness and ease of erection, but protection from the elements, hygienic qualities, and to a certain extent æsthetic qualities, were considered also. The walls were kept low, and an air of spaciousness was maintained by the use of light iron trusses. These units consist of eighty-seven buildings each, comprise all the essential departments and buildings of an up-to-date hospital, and are still of portable construction. The article is illustrated by plans, and is fully descriptive.

The monthly publication, "The Western Architect," for April gives some illustrations from the work of Messrs. Marx & Vigeant, of which we note the terrace house of Mr. George Payson, of Chicago, which exhibits a chastity worthy of a position in Queen Anne's Gate or Albemarle Street. These architects are undoubtedly imbued with the true spirit of the English Mid-Georgian era.

"Stone" is a publication devoted to the more substantial elements of building which has great possibilities, if confined to rather more limited scope. We note among the illustrations a sketch by Mr. Charles Carter of the south porch of St. Mary's Church, Oxford, executed by Nicholas Stone in the reign of Charles I. This sketch appeared in a former number of "The Architect." A further sketch from our paper, from the pen of Mr. St. John Harrison, appears in the June issue, illustrating the gateway of Ely College, Cambs. While the general matters of the text largely relate to the various quarry productions, there are a few stone-built houses illustrated showing some originality of design, the progress of which we shall watch with some interest. We note that a large number of new post offices are projected, which should afford a fine opportunity for exhibiting the skill of the American mason.

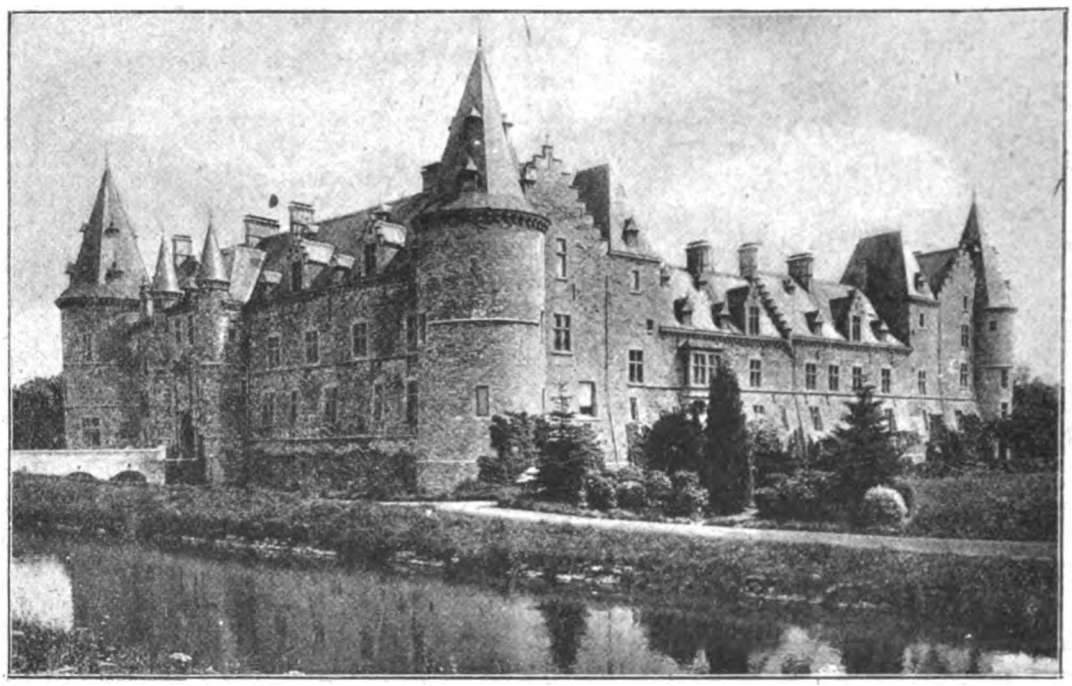
"The Journal of the American Institute" affords a model example of good arrangement, clear printing, and neatness which our own Institute would do well to emulate. The April issue deals inter alia with co-partnership housing in England, by Herbert S. Swan, Executive Secretary of the Zoning Committee of New York City. It treats of the principles adopted in a number of English estate developments upon the lines indicated in the title, including the Ealing Tenants, Limited; the Hampstead Tenants, Limited, and similar companies at Liverpool, Leicester, Wolverhampton, &c. The paper is an epitome of very useful information.

"The Rockefeller Foundation" is a review of the war work and public health activities of this remarkable charitable institution, by the President, Mr. George E. Vincent. To architects the bird's eye view of the Peking Union Medical College and the elevation of the School of Hygiene are of most interest. The foundation's activities included the suppression of hook worm and that terrible scourge yellow fever which was rampant in China in the middle of last century, stirring the doctors of this country to activity and emigration to China to attempt to eradicate the disease. We are informed it is now prevalent in the country of the North Coast of South America. We quote the following trite forecast:—

"When at last peace comes, it cannot quickly bring universal confidence and goodwill. There may be years of suspicion and bitterness, of misunderstanding and recrimination; there is sure to be keen industrial and commercial competition. Is it too much to hope that such work as the Foundation is doing in many parts of the world may tend at least to emphasise the common interests of mankind in turning science from the destruction to the healing and the happiness of men?"

From Australia we regularly receive the periodical "Building," published in Sydney, the scope of which seems almost unlimited. While we cannot accord the

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FALLAIS.—MEDIÆVAL CASTLE.

same meed of praise we feel for the American papers referred to above, we think there are great possibilities for this paper if it were to secure by careful selection a higher grade class of work, and endeavour to interest its readers in the best period work of British and French examples. There are several photographs of war memorials which show much skill of execution, and not a little taste in grouping, with some articles on interior decoration requiring a rather more extended purview.

MANUFACTURERS' COUNCIL.

AN important decision affecting the interests of manufacturers was arrived at last week, the Federation of British Industries, the British Empire Producers' Organisation and the Imperial Council of Commerce having formed a Joint Council:

1. To consider and report upon any questions of mutual interest reflecting the common aims of the three bodies, viz.: To ensure the conservation and development of the Industry, Production, and Commerce of the United Kingdom and her Overseas Dominions, and submitted by any one of the three constituent bodies.'

2. To initiate the consideration of any such subject, and

3. To take any action in relation to such subjects that may be specially authorised by the constituent bodies.

The association of the three organisations should have a very marked effect upon the future of British Industry, as by means of the Joint Council concerted action will for the first time be possible between accredited bodies representative of the business interests —both industrial and commercial—of the United Kingdom and the Overseas Dominions. It is obvious that any recommendations which may be made by such an association on imperial questions, such as the conservation of raw materials within the Empire, will carry great weight with the Government. The industrial organisation of the Federation of British Industries will enable each industry and trade within the United Kingdom at any time effectively and rapidly to submit its requirements and views to a body which fully represents the varying claims of the Empire, and conversely the Joint Council will be able to obtain without delay the views of any trade when imperial questions affecting sectional interests are under its consideration.

ENGLISH AND POLISH HOUSES.

A COMPARISON.

By ARTHUR E. GURNEY, Licentiate R.I.B.A., Member Warsaw Engineers' Association and Architects' Circle, &c.

THE docility with which people in this country submit to avoidable discomfort is a constant source of surprise to those who have lived abroad. After experiencing a winter in England, a Polish friend once remarked to me:—"You English pride yourselves on your high standard of comfort, but you don't know what comfort is." Pointing to the fireplace, she added, "You sit shivering round a bit of a thing like that, in a corner of the room, and you call that comfort!"

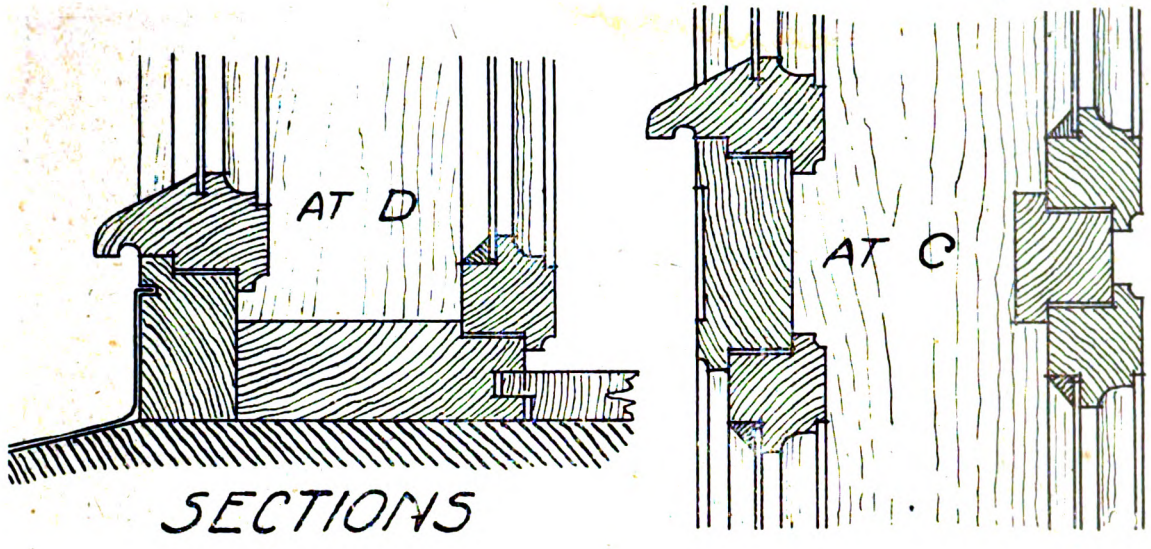
From the Polish point of view, an English house in winter is unquestionably the most cheerless habitation imaginable. Walls too thin to keep out damp and cold; icy floors resulting in eternally cold feet, and consequent congestion—the cause of innumerable ailments; and doors and windows which it is impossible, on account of their construction, to close tightly. Added to this is an antiquated system of heating which is most wasteful of fuel, causes an incalculable amount of avoidable labour, creates draughts, and makes the attainment of an even temperature impossible.

Such conditions would not long be tolerated in Poland, and it is surprising that people in this country should be content to submit to so much avoidable discomfort.

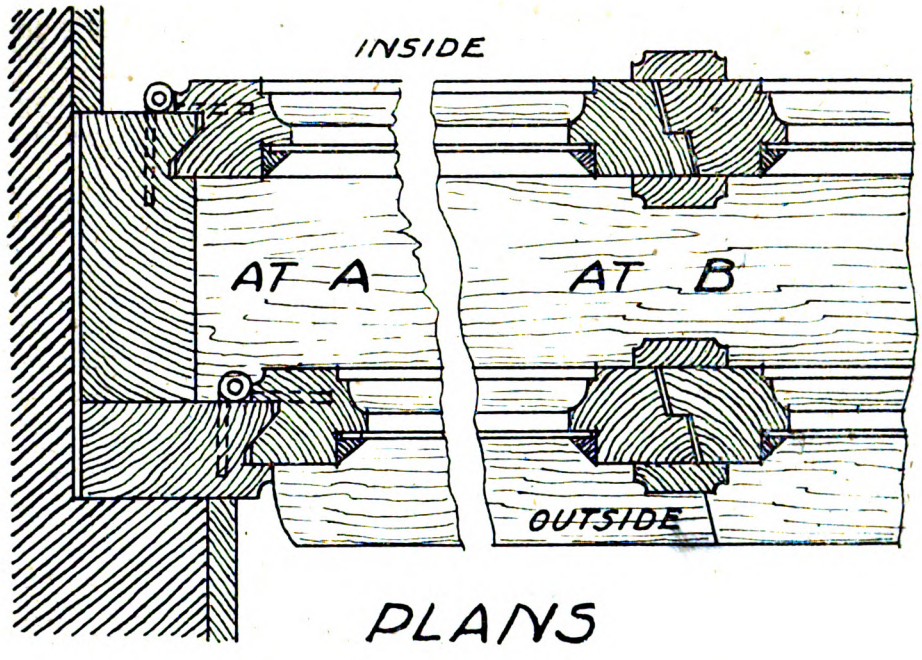
Poland being under the government of three distinct sovereign States, the various parts of the country are subject to different sets of building regulations and by-laws. Notwithstanding this, the arrangement and construction of the houses are very similar in all the Polish territories. The most important difference is to be found in the thickness of external walls. In the districts under Austrian and German rule the minimum prescribed for these is 15 inches, or brick and a half. In the kingdom (or "Russian" Poland) it was two bricks, or 22 inches—the bricks being rather larger. The latter thickness was not necessitated by the climate of the country, but merely the result of the thoughtless application to it of the Russian building regulations.

The spaces between floor and ceiling joists are everywhere well pugged, and the floors themselves, in all but the cheapest dwellings, consist of two layers—the lower formed of rough deals, and the upper of polished oak or

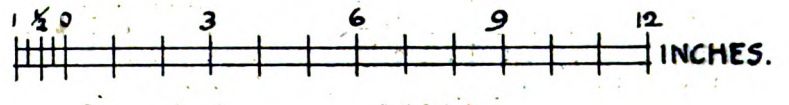
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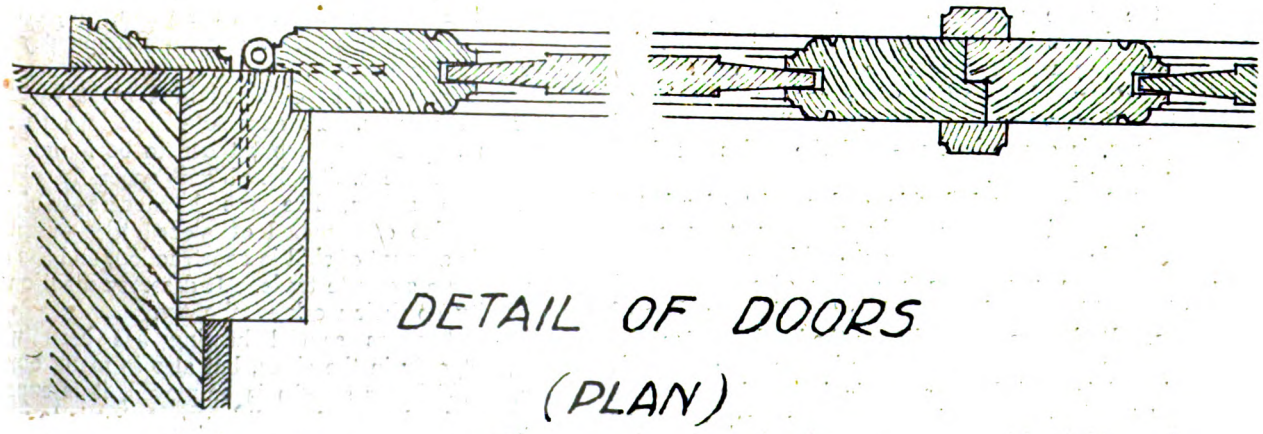


SECTIONS



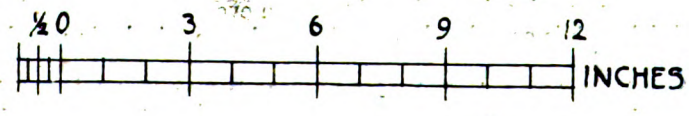
PLANS



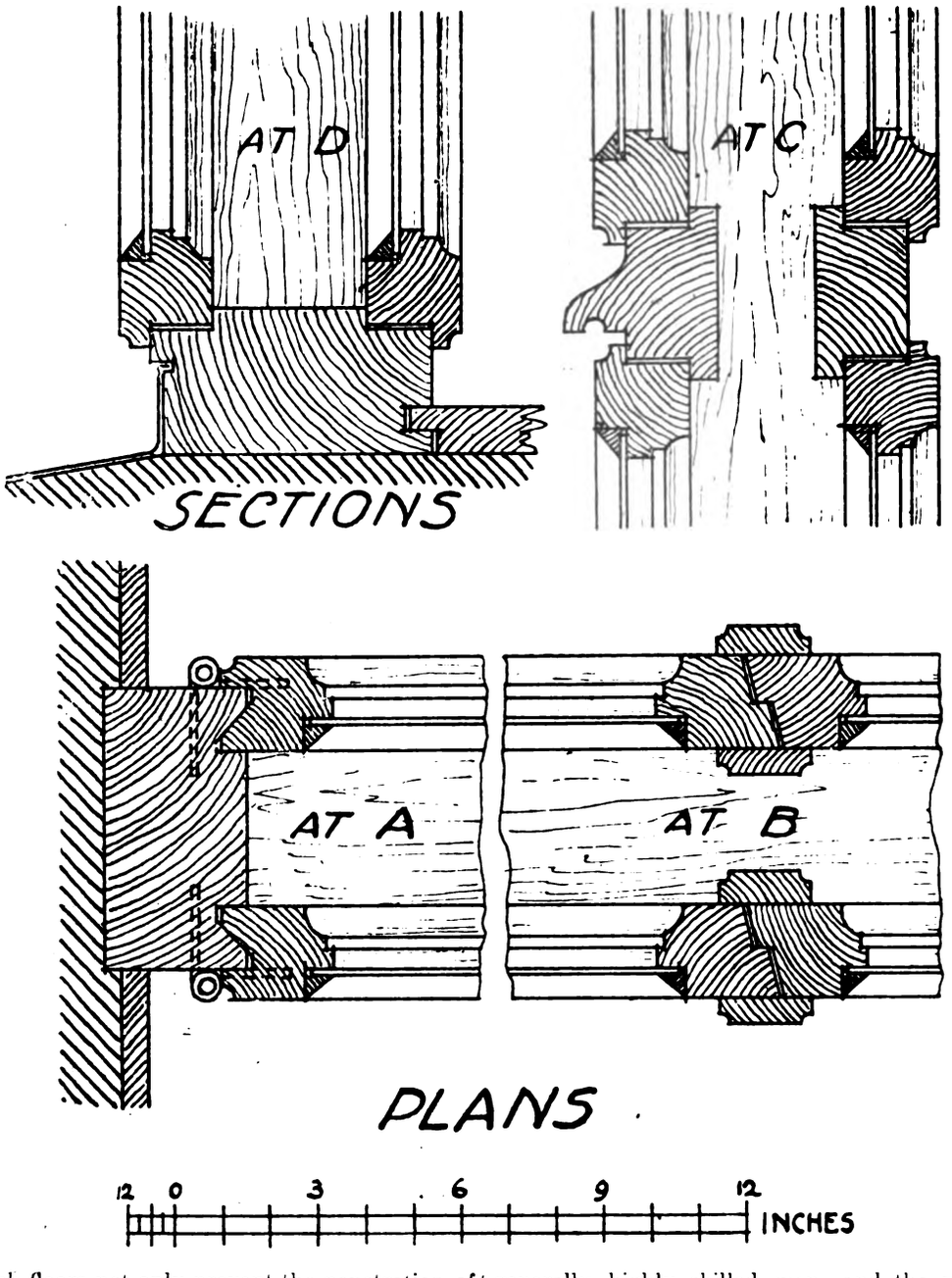


DETAIL OF DOORS

(PLAN)



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parquet. Such floors not only prevent the penetration of cold and sound, but are more hygienic than the carpets—well nailed down and beaten only at rare intervals—which, with a thin layer of boards, are still the only protection for the feet in English houses.

The doors of Polish houses, being rebated, close more tightly than English doors, and the two surfaces closing against the frame provide a better protection against draughts. Doors leading into, or situated between, the principal sitting and bedrooms are generally constructed as folding doors. Where there is a continuous suite of rooms the effect, when these doors are all wide open, as at receptions, is certainly fine—and the Poles are fond of entertaining lavishly.

The windows are all double and consist of rebated casements. Until comparatively recently they were hung on single frames—to open out and inwards—and as this construction represents a saving of material and labour it is still generally applied in the cheaper class of buildings. It also greatly facilitates the bricklayer's work as the frames are placed in position before the surrounding brickwork is carried out, and it is then built up around them. The more expensive structures are, however, now all provided with casements opening inwards only. These are put in after the brickwork is completed. Sash windows are unknown in Poland.

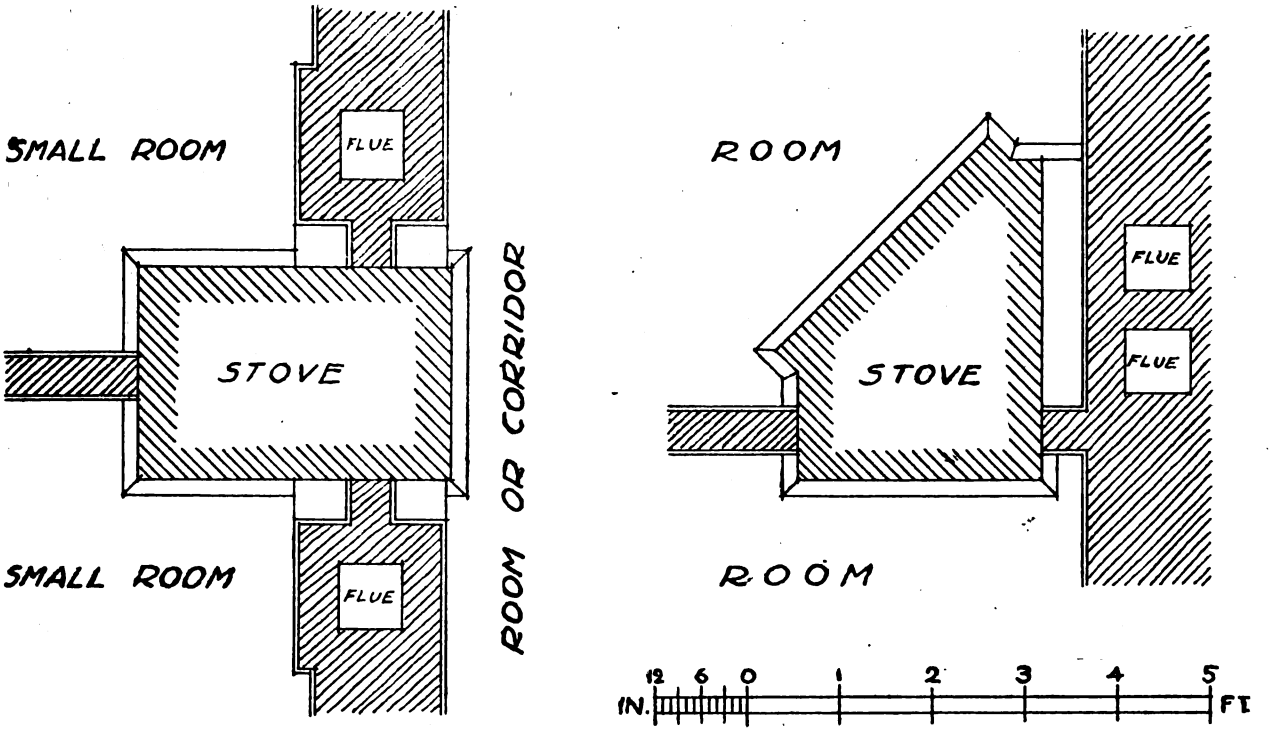
Although jerry work is to be met with in Poland, as in every other country, the joiners and carpenters are generally highly skilled men, and the majority take a pride in good work. Most of the Polish houses are still heated by means of large stoves, constructed of special glazed tiles, and reaching very nearly to the ceiling. As they do not require replenishing, the doors are screwed down after the fire has been well set going, and the stove retains its heat for the rest of the day. Where the rooms are small the stoves are built in the walls, projecting on either side, and by this means one stove frequently heats two or even three rooms.

These stoves can be obtained in a great variety of designs and colours. In expensive buildings they are sometimes very elaborate, but those to be found in the average house are white-glazed and generally plain in design. The stoves, like the kitcheners—which in Poland are also constructed of glazed tiles—require a considerable amount of skill in construction, and the stove builders form a separate trade. It deserves mention that the majority do their work excellently.

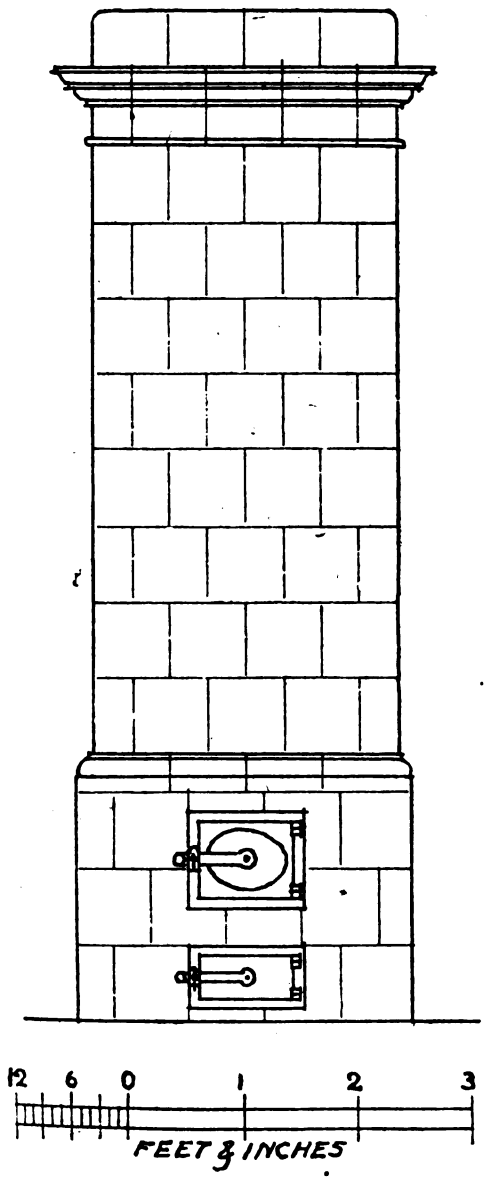
Of recent years central heating has been widely applied, not only in the cities, but also in many country houses. Whichever system is employed, it is expected to fulfil one fundamental condition, and that is to permit of an even temperature being maintained in every part of the house, including bedrooms, corridors and bathrooms.

It is true that the Polish climate is somewhat more rigorous than the English, but it is not nearly so trying.

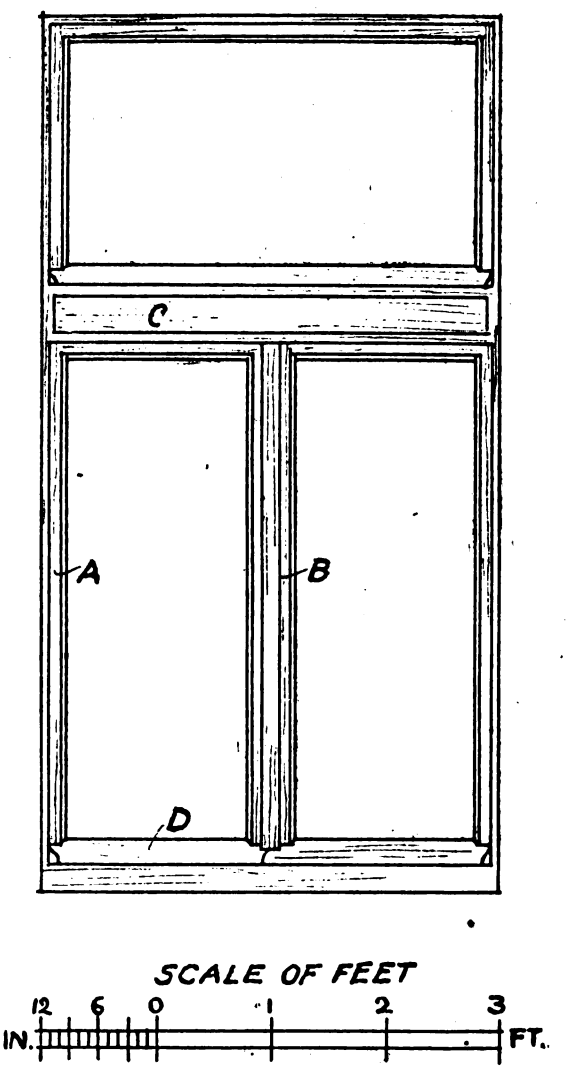
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PLANS SHOWING ARRANGEMENT OF STOVES BETWEEN ROOMS

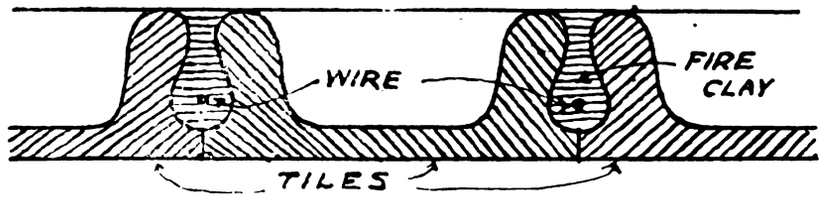


A PLAIN STOVE



ELEVATION OF POLISH WINDOW.

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STOVE DETAIL OF CONSTRUCTION (PLAN)

being dryer and less subject to sudden changes. The difference is, moreover, not as great as most people imagine, extremes of temperature being unknown in Poland. The climate of Warsaw and Cracow is practically the same as that of Berlin and Vienna.

Surely it is time a little more regard were shown in the construction of English houses for the comfort of their occupants. Walls 9 inches think are not a sufficient protection against atmospheric influences, except in sheltered positions. Exposed angles, at all events, should be thickened, as they offer two surfaces to the operation of cold and moisture and, therefore, constitute the most vulnerable parts of all buildings.

All floors, at least those immediately above the ground and ceilings under the roof, should be well pugged. Although windows, except in very special cases, need not be double, properly constructed casements should be substituted for the antiquated and inadequate sash windows.

The deeply rooted prejudice existing in this country in favour of open fireplaces is not shared by those who have experienced the solid comforts provided by other methods of heating. No doubt a fire is a pleasant thing to look at, and open hearths might be provided in the principal sitting-rooms, in addition to the other means of heating—this is often done in the more expensive private houses in Poland.

The idea that an open fireplace is the only means of assuring good ventilation is a mistake. Where rooms are properly heated ventilating flues, as used in Poland, are quite sufficient for the purpose.

A matter of great importance is the heating of the hall, which, being in direct communication with all the rooms in a house, has a great deal to do with their comfort. Bath-rooms, too, should be well heated—a cold bath can be a real pleasure in the severest weather if the room is warm, and can then be indulged in without danger to health even by the less robust.

The introduction of the improvements required to make the English house comfortable in winter would, of course, entail a somewhat higher cost of construction, and consequently a slightly increased rent. But that would be more than compensated by the greatly enhanced comfort enjoyed by the occupants.

THE METRIC SYSTEM IN ITS RELATION TO THE SURVEYORS' PROFESSION.—II.

By Lieut. A. J. MARTIN (Fellow).

Tithe Maps.—These can follow their present course as, little by little, on redemptions and reapportionments taking place, the Ordnance maps, which, as already pointed out, are to International scale will be substituted for them. When once the transfer is complete undoubtedly much source of dispute as regards the endowments of colleges, cathedrals, and churches will be removed. As many of us know, also much of the work on which we are employed in this connection gives us much trouble and little profit.

Title-Deeds.—As regards areas or lineal measurements mentioned in title-deeds the metric equivalents could be endorsed on any deed, or schedules could be attached to the deeds. Upon all changes through death or alienation only metric quantities would be allowed in estate duty valuations.

Manor Rolls.—Similarly manorial court rolls would have to be brought up to date, and all areas converted to metric equivalents and agreed to by the lord and tenant as occasion arose.

I once suggested a railway mile of 1,500 meters (a reduction of about 4 per cent.), the penny also being reduced in value 4 per cent. by making 1,000 farthings, instead of 960 farthings, to the sovereign. But a railway expert pointed out to me that railway stations were neither an even number of miles nor kilometers apart, but odd distances, and that the rates were in Great Britain worked out from station to station. But, he said, if a decimal system of measures and weights, and perhaps coinage also, were adopted, we could with calculating machines work the charges out quickly and to a nicety. I mention this as an example that it is not for us, in this discussion, to go outside questions cognate to our profession, this being a question for the railway companies to settle with the Government.

The Road Mile, however, would probably affect many surveyors. Stones or iron discs (painted a different colour to the background) would eventually mark out, for instance, kilometer distances. There would be no special urgency about this, but there would be this difference—places for fixing the new stones would be settled by scaling off the distances from our maps, which are already metric, and thus all the new stones would be equidistant, which is more than one can say of our present milestones. If anyone doubts this, let him ask both the pedestrian and the garage proprietor, and also himself, when he pays the bill. The advantage of scaling off is that if one stone is placed wrongly it will not affect the remainder.

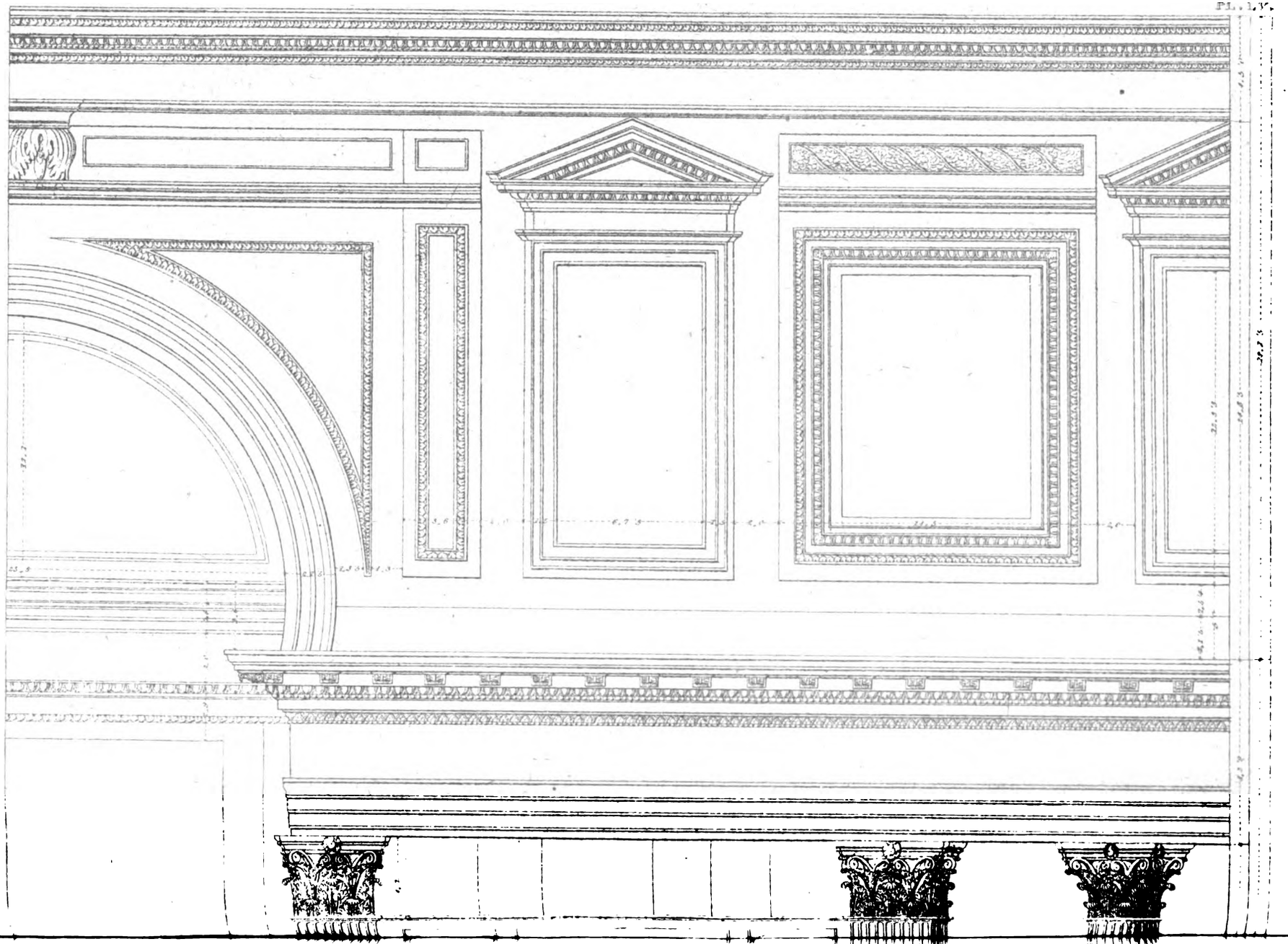
QUANTITY SURVEYORS' WORK.

Quantity surveyors could not fail to appreciate the great help which the inter-relationship of measures and weights would be, quite apart from the decimal facilities in calculations. Calculating machines and slide-rules will take the place of much clerical labour, which apparently will be scarce in the future. There need be no appreciably long transition period for quantity surveyors as manufacturers would at once publish revised catalogues in metric terms. How simple price lists in the future would be may be seen by taking the quotations for cement as an example; it is now quoted by the ton, hundredweight, cental, yard, cubic foot, hundred, peck, chaldron, basket, bushel, bag, and so on.

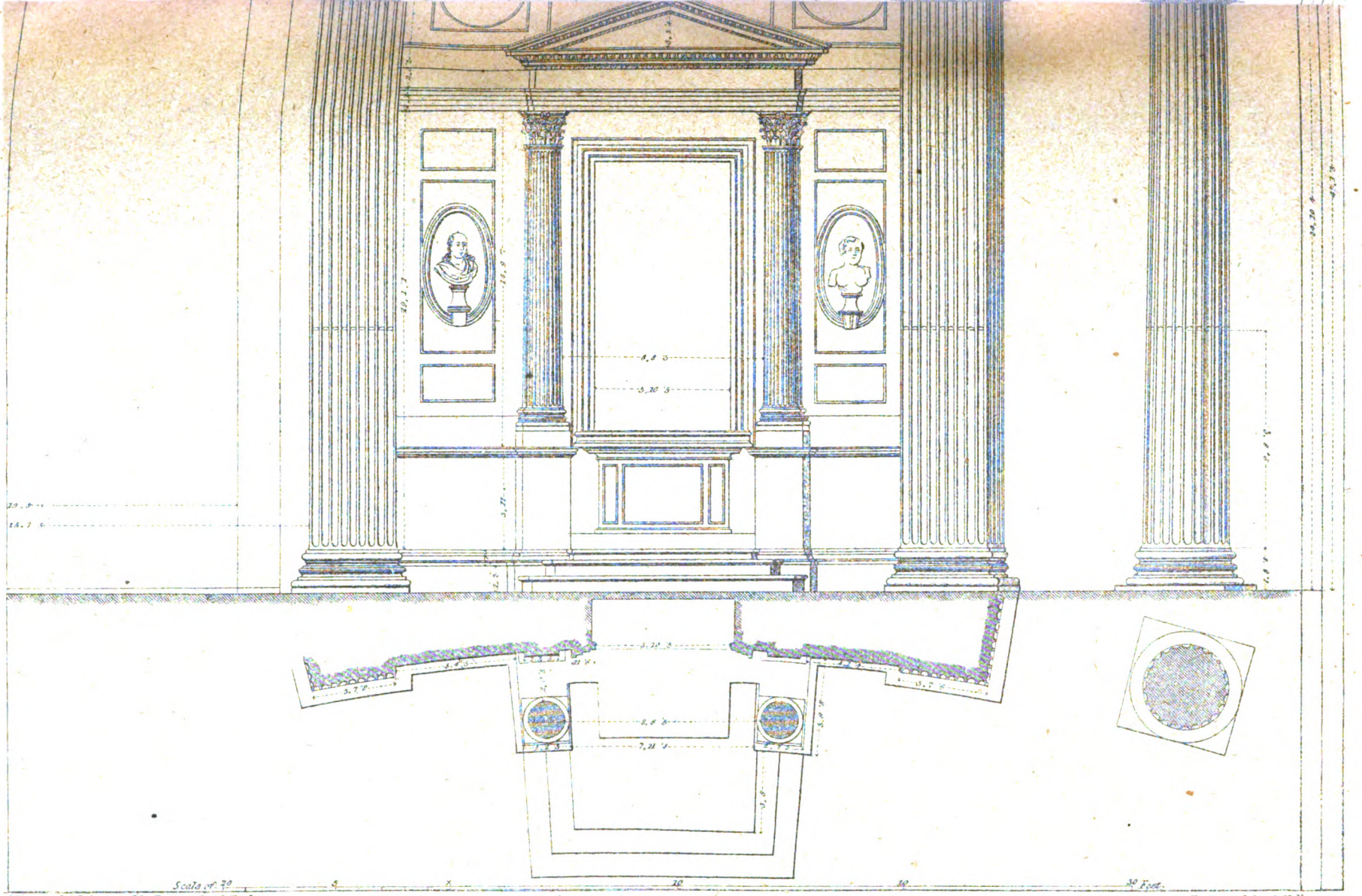
I trust quantity surveyors' work will form the subject of a special paper by one more competent to deal with it, but I should like here to refer to the rod of brickwork and planwork. The side of a square rod of brickwork is 5½ yards, equal to 5.029 meters. If this were reduced to exactly 5 meters, or in proportion of 5,029 to 5,000 the reduction of itself would not necessitate any alteration in the size of the brick, as a rod is not necessarily composed of an exact number of bricks and joints. But it would be also necessary to express the brick in metric terms. The Royal Institute of British Architects has fixed the average size of a "standard" brick in inches at 9 by 4¾ by 2½; the equivalent of this in centimeters is 22.73 by 11.05 by 6.78. These figures would probably be modified into 22¾ by 11 by 6¾, the slight differences being within the margin of error allowed. A metric brick with joints, I suggest, might be reckoned as 24 by 12 by 8 (centimeters) in the same way as the present

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Measured & Delineated by E. Cresy & G.L. Taylor.

Engraved by S. Hollyer.

PANTHEON, ROME,

INTERIOR.

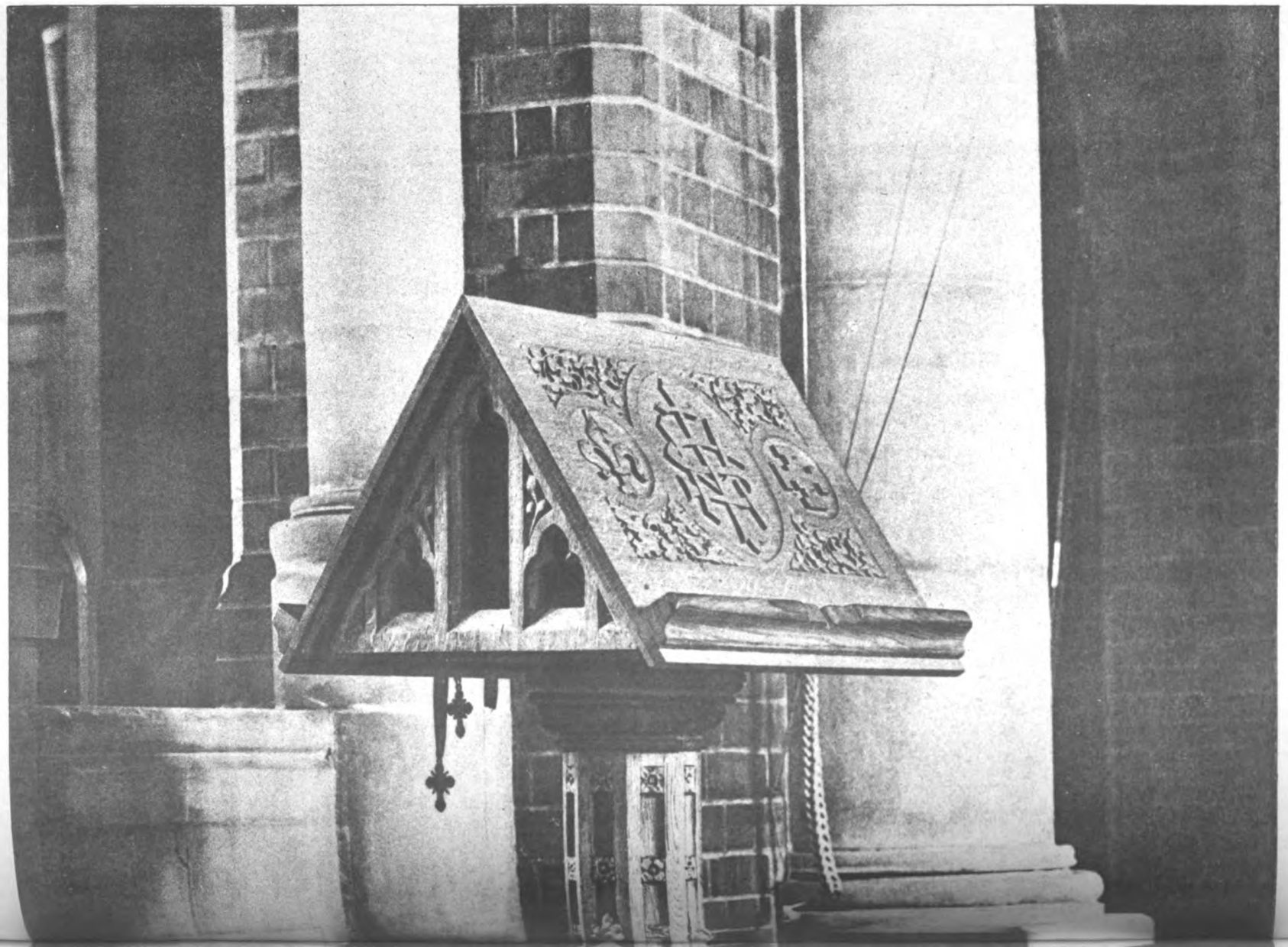
Pier next the Entrance, with the little Altar.
Part of the adjoining Recess — and the Attic over the whole.

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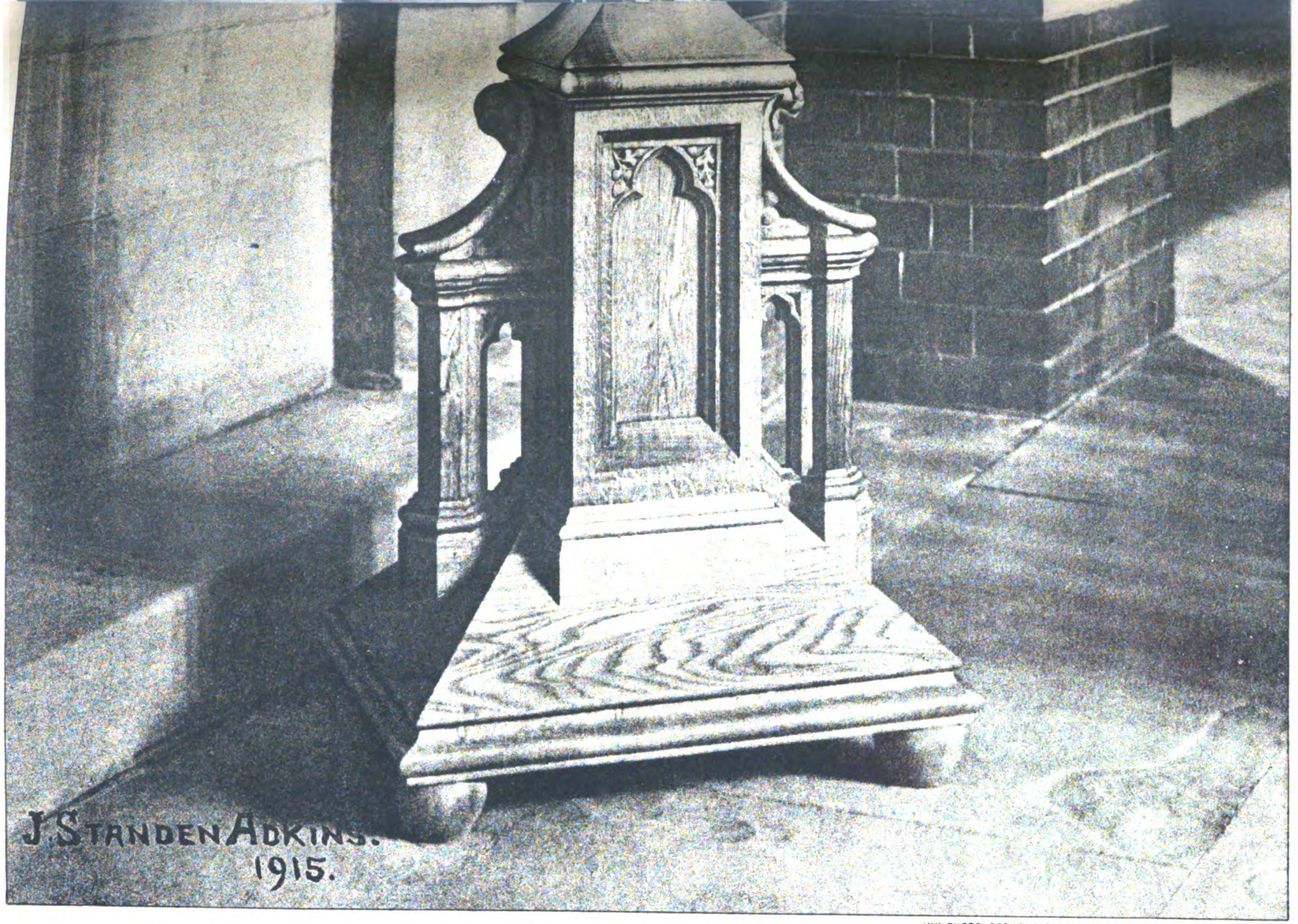
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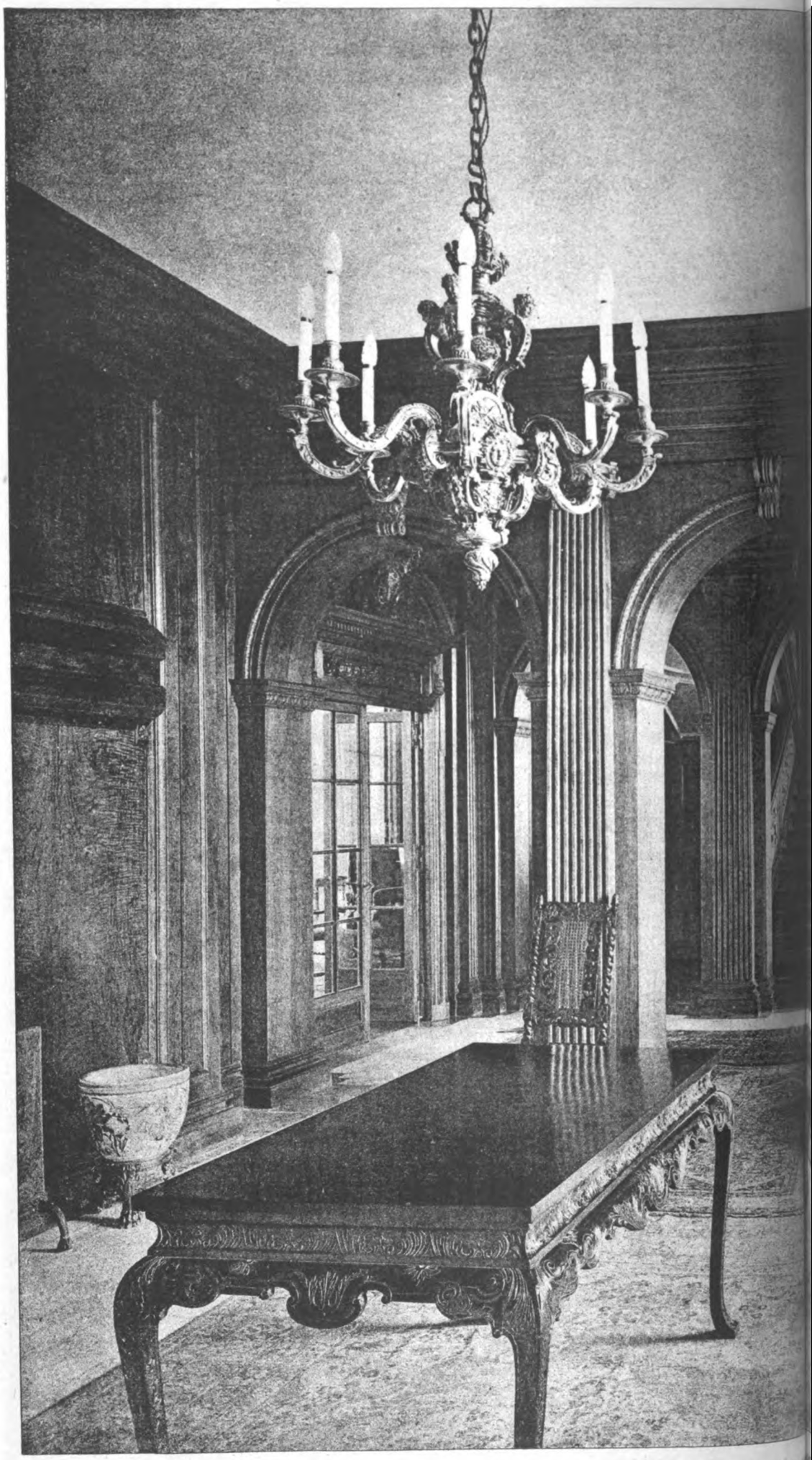
READING DESK. CHURCH OF SS. MARY AND CHAD, LONGTON.

MR. J. STANDEN ADKINS, ARCHITECT.

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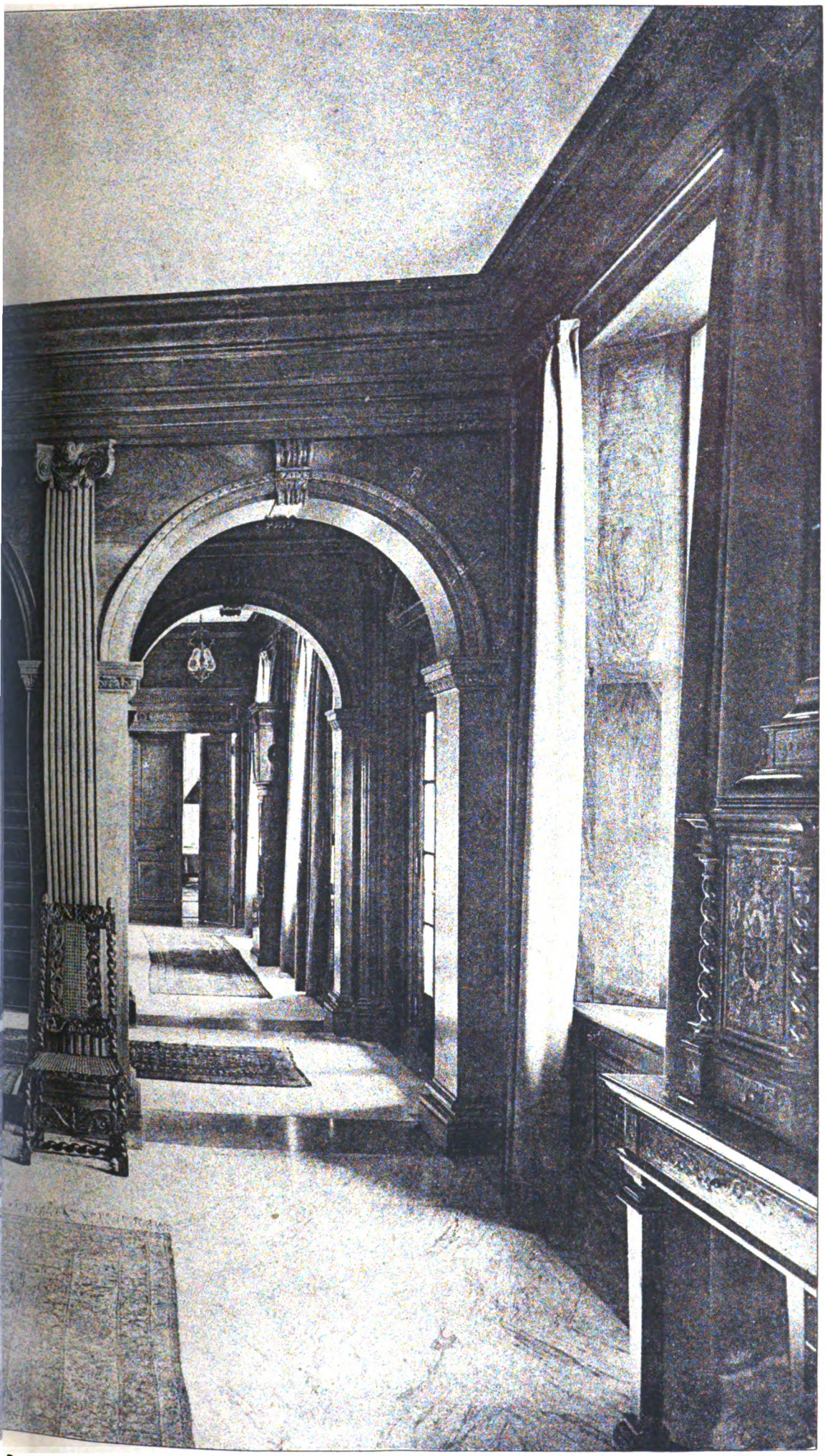
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"ARDENRUN PLACE," L
MR. ERNEST

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.D, SURREY. THE HALL.

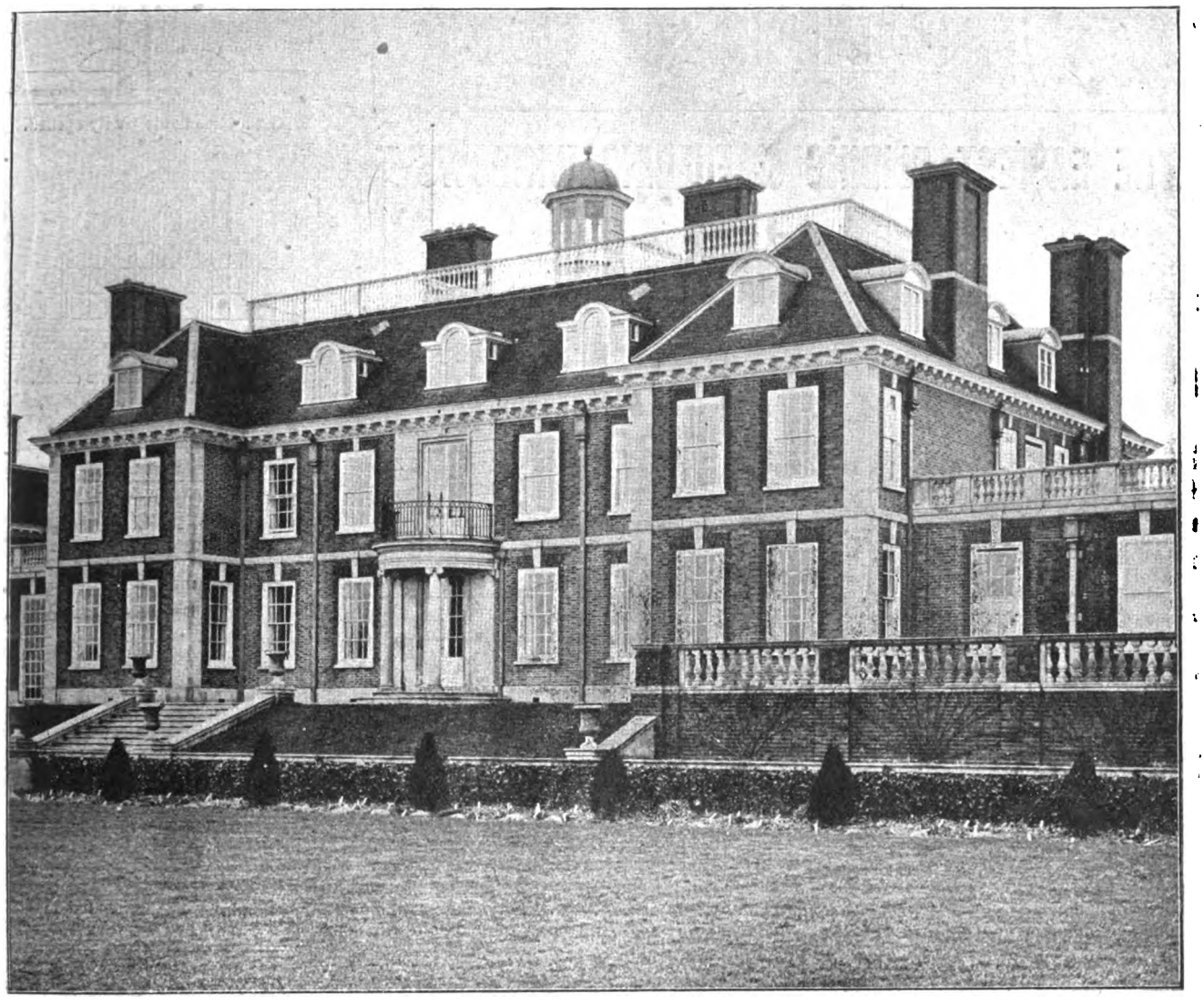
A.R.A., ARCHITECT.

1ST, 1918.

INK PHOTO SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W

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WE give an exterior view of Ardenrun Place, showing the work of Mr. ERNEST NEWTON, A.R.A. Interior views appear in our issues of July 5, 12, and this week.

brick and joints are often considered as being 9 by 4½ by 3 (inches). A square rod of brickwork would be 25 square meters instead of 30¼ square feet.

Where house plans are now plotted to the scale of 1-96th (8 feet to 1 inch) they could in future be plotted to a scale of 1-100th. In this way 1½ brickwork would on a plan be practically the same as now. But I only throw out these figures as hints, and trust the quantity surveyors present will help us in the discussion.

ARGUMENTS AGAINST ANY REFORM WHATSOEVER, AND ANSWERS.

Whatever reform we adopt there will always be the following arguments to overcome: The trouble, the difficulty of organisation, the cost of change, and the fact that the measures and weights of our forefathers should be good enough for us. Let us deal with these.

The Trouble.—The trouble to the few on whom the responsibility of organising the change would fall would doubtless be considerable. They would, however, be officials, and their trouble would be met by their salaries. The trouble to the community would be small if the organisation were well thought out. Any trouble which might be experienced would be justified when the question at issue is whether we are to survive or go under.

The Organisation.—Whatever reform is undertaken it will require Government organisation. If we can organise for a huge military war we can easily organise for this trade war. An official of the Standards Department of the Board of Trade told me years ago that that department was quite ready if it received orders. New weights would be issued in exchange for old ones. The manufacture of these new weights could be undertaken by a Government "Mint," or by controlled private enterprise; so also with measures of capacity and lineal measures, but it should be noted that new scales for weighing would not be necessitated by the change.

The Standards Department mentioned would probably be made responsible for carrying out the reform The work would have to be done expeditiously, effectively and with as little inconvenience to the public as possible. Valuable assistance could be rendered by the Incorporated Society of Inspectors of Weights and Measures, which has its members in all important centres.

I propose that there should be no transition period as generally understood (two years having been usually suggested), with two different systems of weights on the counter at the same time, and an apathy for nearly two years ending with a violent rush to comply with the law at the last moment. Instead I recommend that the change should be made by one trade at a time or by allied trades, and generally speaking, county by county or district by district. Thus the farmers, corn merchants, millers and bakers within a certain area could all be dealt with together in a few days. Then the butchers on another day, the grocery and allied trades on another, followed by all other trades in food before the coal merchants, ironmongers, &c., were dealt with. It might be found advisable to effect the change with householders first, but I think it would be better to

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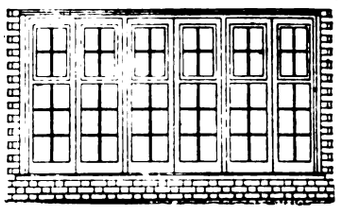
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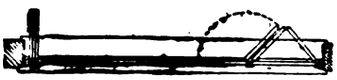
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SECTION.


PLAN: Casements partly opened.


ELEVATION: Windows closed.


PLAN: Left Casements folded back, Right partly folded.

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Telegraphic Address—"Oaktree, London." Telephone No.—12327 Central.

"A Charming Retrospect."—C.T.C. Gazette.

Brugge-Zeehaven

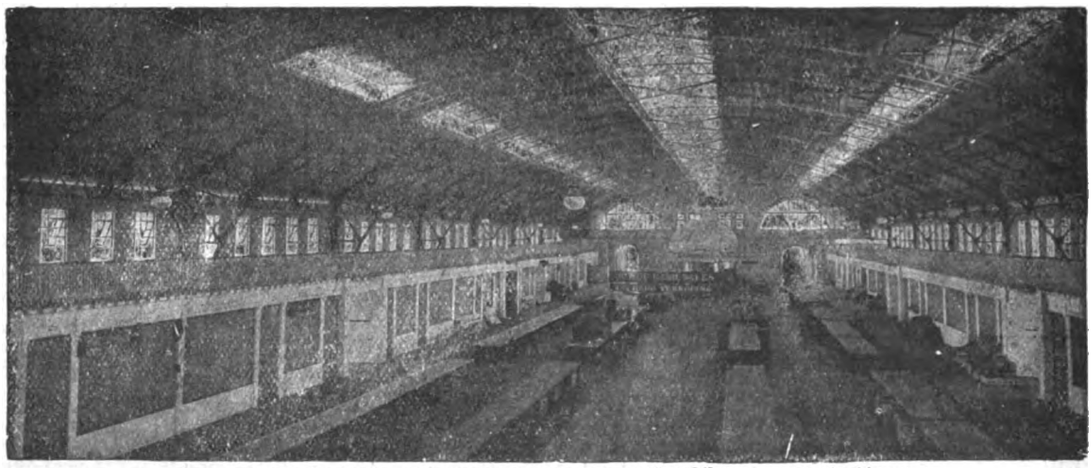
A RETROSPECT AND A FORECAST.

The History of Zeebrugge in brief, from the Origin of the Movement for its Creation.

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allow each householder to change his weights with the local tradesman (who would be compensated) as he wished, but with a time limit. The borough, urban district and rural district councils would be called upon to help in the distribution, &c., aided by the police, who formerly tested all the weights and measures in their areas. The work could be further split up by changing weights at one time, measures of capacity at another. Lineal measures would probably best be changed through the local tradespeople as suggested in the case of the householder. Voluntary workers or others could distribute cards of "practical equivalents" in shops and households.

In particular trades it might be found advisable to make the change throughout the whole country at one time. Thus the draper's yard and tape measures could be altered to the meter and metric tape measures on a given date. For this purpose the Standards Department could consult with the councils of the various trade associations. In the surveyors' profession this Institution, with the aid of the Provincial Committees, could assist in issuing new faces for our levelling staffs, new chains, new tapes, and new boxwood scales in exchange for our old measures, or, if any surveyor did not wish to surrender these, he could purchase new measures. In factories the change could be made as parts were scrapped with a time limit.

Directions could be inserted in the Act or issued by Order in Council as to how and when the reform should be carried out in the Navy, Army, Government departments, and local governing bodies. Drill and other manuals, for instance, would require altering. In cases like royalties and the wages of labour, where the remuneration is based on one of our present units, such as the ton for example, it should be made compulsory to alter to the nearest new unit, and to adjust differences in the remuneration by using fractional parts of a monetary unit where necessary. Any dispute on this point could be referred to a body set up by the Act, and which, for convenience, I will call the Metric Technical Commission. One of the duties of this body would be to stop passive resistance (if any) to the Act, such as using scientific equivalents where practical equivalents should be used. Thus a pace of 27 inches would become a pace of so many centimeters, and not expressed in millimeters and absurd decimal fractions of millimeters. Such a body too would have power to stop the absurdity of a manufacturer calling the size of a collar 419.1 millimeters (the exact equivalent of 16½ inches) instead of 42 centimeters. It is hardly likely there would be any passive resistance of this nature as it would recoil on the author, but there would probably be cases where a technical body set up by the Act could give a helping hand and a final decision. Thus, by Act 39 and 40 George III., the weight of the bag for hops must not exceed 10 lb. to every 112 lb. In round figures this is 9 per cent., and if this point were not settled in the reforming Act of Parliament, the Commission could be given power to decide that the weight of the bag should not exceed, say, 10 per cent., and so on in similar cases.

(To be concluded.)

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

The County of London Royal Engineer Volunteers. London Army Troops Companies.

SIR,—I take the liberty of enclosing copy of a booklet just issued with reference to the County of London Royal Engineer Volunteers. The authorities are urging us to bring the corps to its full strength as quickly as possible. I am also enclosing a poster and leaflet, copies of which are available for shops, works, factories, &c. I need hardly say how greatly any assistance that you could give us would be appreciated by the officers and men of the corps, who are mainly engineers, architects, or members of kindred professions.—Yours, &c.,

C. B. CLAY,

Headquarters, Balderton Street, W. 1: July 15, 1918.

Government Control of Trade.

SIR,—I am instructed to invite your attention to the enclosed statement of action taken by the London Chamber of Commerce on the subject of Government control of trade, and to a letter recently received from the Prime Minister (set forth in the statement referred to) which indicates that he is "sympathetically disposed" towards a series of contentions submitted by the Chamber with regard to the policy which should be adopted by Government Departments in administering Government control of trade.

In view of the large number of trades that are affected by Government control it would appear to be useful to indicate (in case you may think fit to make any editorial comment on the subject) that any such trades, who consider that the policy of Government Departments is not in accord with the contentions of the Chamber, in regard to which the Prime Minister indicates that he is sympathetically disposed, are afforded by this letter an opportunity of raising the matter with those Departments, either as individuals, or through the medium of their Chamber of Commerce or organised trade association.—Yours, &c., CHARLES E. MUSGRAVE, Secretary.

July 13.

[The particulars are too lengthy to publish at the present time, but no doubt a copy can be obtained by anyone interested. The views expressed are sound ones, that business matters should be attended to by business men.—ED.]

The State and Housing.

SIR,—The belated Memorandum issued last Tuesday by the Advisory Housing Committee is typical of the unbusinesslike manner that the housing problem has been approached from the very commencement. Nearly every suggestion is by now ancient history. Mr. Hayes Fisher in July, 1917, announced that the Government could not rely on more than 300,000 houses being built in the first year after the conclusion of war; the scheme for the State providing the cost of building dates back to April, 1916, and that for the transitional period, with the difference of seven for five years, was made public in October, 1917.

The latter scheme can only end in disaster, endless litigation between the State and municipal authorities, and the formation of enormous administrative staffs causing increase of rates and taxes, and consequent raising of rents.

The suggestion of public competition for a series of type plans was heard of as a rumour a year ago. When this does happen let them conform more to common sense and comfort than to "a high standard of design," and be open to prospective inmates, many of whom have the necessary technical knowledge, as well as to "architects of experience and taste."

As regards rural districts, the main cause that has driven men from the land is not the lack of houses, but the miserable rate of wage.

The one practical suggestion is the appointment of District Housing Commissioners. Let this be done immediately, and they will then find that the house shortage is more or less a myth.—Yours, &c.,

H. R. WELLS.

115 Old Street, E.C.: July 16.

THE will has been proved at £25,581 of Mr. William Charles Manning, architect and surveyor, of Newmarket, Suffolk.

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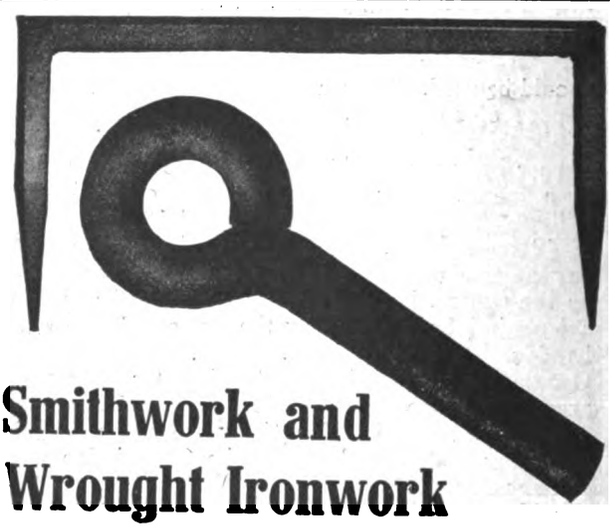
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THE ARCHITECT

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FORTHCOMING EVENTS.

July 12 *to August* 10

Art Gallery, Rochdale. Exhibition of Government Housing Schemes and Town Planning Schemes in Bolton, York, Birmingham, Dublin, Rochdale, &c

Tuesday, July 30, *and Wednesday, July* 31.

Half-yearly Meeting of the National Federation of Building Trade Employers of Great Britain and Ireland, at 10.30 A.M., at the Grand Hotel, Colmore Row, Birmingham.

LOGIC VERSUS REVOLUTION.

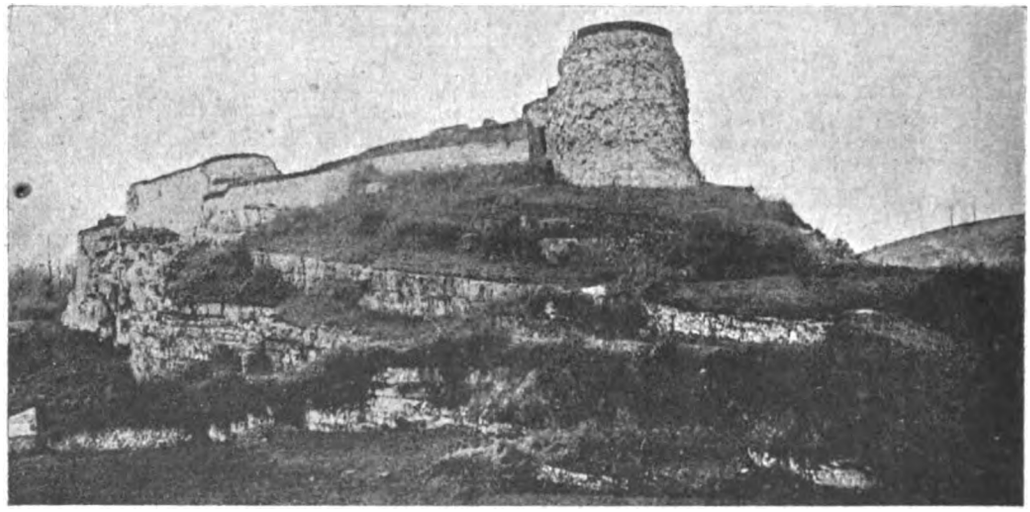
THE recent statement of the aims of the Labour Party is calculated to make us think whether what we have hitherto considered as sound economic principles or State socialism is most likely to further the greatest good of the greatest number. The statements made by Mr. Henderson in a pamphlet recently published indicate the desire of a section to bring a millennium of plenty to the worker, but when we go into the question of ways and means it is transparently clear that the ends sought are to be obtained not by building up greater wealth, in the production of which all may have a share, but in the confiscation of existing wealth and its redistribution. Crushing super-taxation on the rich, the building up of a huge system of bureaucracy in which the Government will perform duties now carried out by the private citizen are the means proposed. We are to forget that the Scriptures tell us that "to him that hath shall be given but from him that hath not shall be taken away even that which he hath," and we are to reverse the process. The unthrifty, the idle, and the unfortunate are to have their lot bettered at the expense of those who have proved their ability by their success. Trade union rules are to be restored at the conclusion of the war, and we are far from saying that a pledge which has been given should not be redeemed if the working classes really desire it; but if this be conceded the same principle must apply to the restoration of controlled establishments and businesses to their former private owners, which many members of the Labour Party are wholly unwilling to concede. They are in fact anxious that railways, mines, and other great industries, which have been built up and on the whole well administered by private enterprise, should be run in future as national undertakings, so that the functions of the State would be vastly extended and the Government of the country become the autocratic employer of the bulk of the population. Underlying all these proposals there is doubtless the conviction that the Government is more amenable to pressure than private employers, and that an autocratic Socialistic Government can be relied on to promote labour interests at the expense of all others.

In the arguments used we discover an essential fallacy, which is that the wealth of this or any country is unlimited and that the machinery which has hitherto created wealth will go on blindly and mechanically producing it, whatever is done with the proceeds of industry, like bees bereft at intervals of the honey they have stored. No allowance is made for the fact that the inducement to a man or company to organise an industry has mainly been the wish to obtain profits, and that fortunately for the world few of us can further ends which may be selfish without indirectly or directly benefiting the community. If we open up a mine or start a new brickfield we must employ labour, and if a great demand for labour arises the workers' wages automatically rise with or without friction between employer and employed. The wealth which a private individual accumulates usually is a fraction of the total wealth which his action has automatically created for distribution among the working classes, and the more such fortunes are made the greater opportunity the worker has of obtaining increased wages and better conditions.

Labour has been thrown off its normal balance by the experience of the war, an abnormal situation has placed us temporarily in a condition in which there is no international competition, war has forced us to produce great quantities of goods without consideration of their real market value, time has been an essential factor, and in the present crisis finance and economics have been completely side-tracked. And all these conditions have been produced by war, and by war only, and though it is often said that the war has changed everything and we can never revert to pre-war conditions the argument, though true in minor ways, is as a whole utterly fallacious, for it is clear that the State must and will have to revert to conditions of sound finance in which revenue balances expenditure, as there is an inevitable end to every spendthrift's career. What we can learn from the war is the advantage of combination, the importance of the increase of output, and what may be gained by the greater use of machinery. What the working classes must learn is that the rich and successful employer by his energy, management, and control is creating wealth which they automatically share. They may not in some cases get all they should have, but their power of combination is so great and the interdependence of capital and labour so close that they will usually have the requisite power to obtain what can be fairly described as their rights. But if the employer is to be eliminated either by the substitution of the State in an executive form or simply by the influence of crushing and penalising taxation the worker will be poorer in the end, as he will lose a market for his labour. The theory that the employer has a gold mine which he jealously guards from others is usually a fallacy, and even if it were the truth it is open for labour organisations to follow his example and set up co-operative enterprises, so retaining all profits for themselves. This, and not the innovation of State interference, is the best manner in which economic truths can be tested, and if it were done it would probably be found that what the successful employer earns would be very much the same thing as what labour would have to pay its nominees for management.

But if the relations of capital and labour are placed on a sounder basis and both try to promote production there is no reason why wages should not be greatly increased in many cases. It is obvious that if the worker could by improved methods and application double his output he would have little difficulty in doubling his wages, whereas if he took all his employer's profits he would often gain but a moderate percentage on his present wages, and would in addition kill the goose which lays the golden egg by forcing the men of enterprise who create wealth to seek more congenial fields for the exercise of their activities.

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MOHA.—THE CHATEAU.

Several plain truths should be emphasised in quarters where they may be unpopular. The first is that unless the State can produce at a profit it must, like an ordinary private owner, become bankrupt, and therefore State employment will not in the end be an advantage to labour. The second is that whatever is paid for out of State funds will in the end be paid for by the whole community, and that no Parliamentary majority can override or do away with the inexorable laws of economics. The third is that the best interests of every class in the country can only be promoted by allowing to every man all reasonable freedom for the exercise of his initiative and enterprise. We must fix our minds—not on the small question of dividing the wealth which exists, but which could be easily dissipated without permanent advantage to anyone—but on the very much greater problem of producing wealth and organising our methods to that end, for if we do not Germany, who has shown what she can do by military organisation against a world in arms, may have another lesson for us which would render even the military success which we all hope for useless and ineffectual. We would urge the workers of our nation to remember that the country in which labour is most happily placed is America, where wages and production are both high and where socialism and internationalism are both at a discount.

Thought and the exercise of a little logic will convince us that no happy elysium is to be reached through the blackened gateway of revolution, and that what is done for the community must be paid for by the community.

NOTES AND COMMENTS.

MR. HERBERT W. WILLS, F.R.I.B.A., has terminated his connection with "The Builder," of which he has been Editor for over five years, and has been appointed Editor of "The Architect," and will take up his appointment as from September 1.

HIS MAJESTY THE KING has consented to open Australia House at noon on Saturday, August 3. The building, which has been erected on a site at the corner of the Strand and Aldwych, is to be the headquarters of the Commonwealth of Australia in the capital of the Empire. The erection of the building has been carried out under the supervision of the architects, Messrs. A. Marshall Mackenzie & Sons. Throughout the interior wood, stone, and marble from Australia have been plentifully used. His Majesty laid the foundation stone on July 24, 1913. The purchase of the site cost £379,756, and the total cost of the building when complete will be close upon a sum of £1,000,000. The building consists of ten floors, with an upper and lower basement.

The Albert Medal of the Royal Society of Arts has been presented to Sir Richard Tetley Glazebrook, C.B., F.R.S., &c., for his services in the application of science to the industries of peace and war by his work as Director of the National Physical Laboratory since 1899 and as Chairman of the Advisory Committee for Aeronautics.

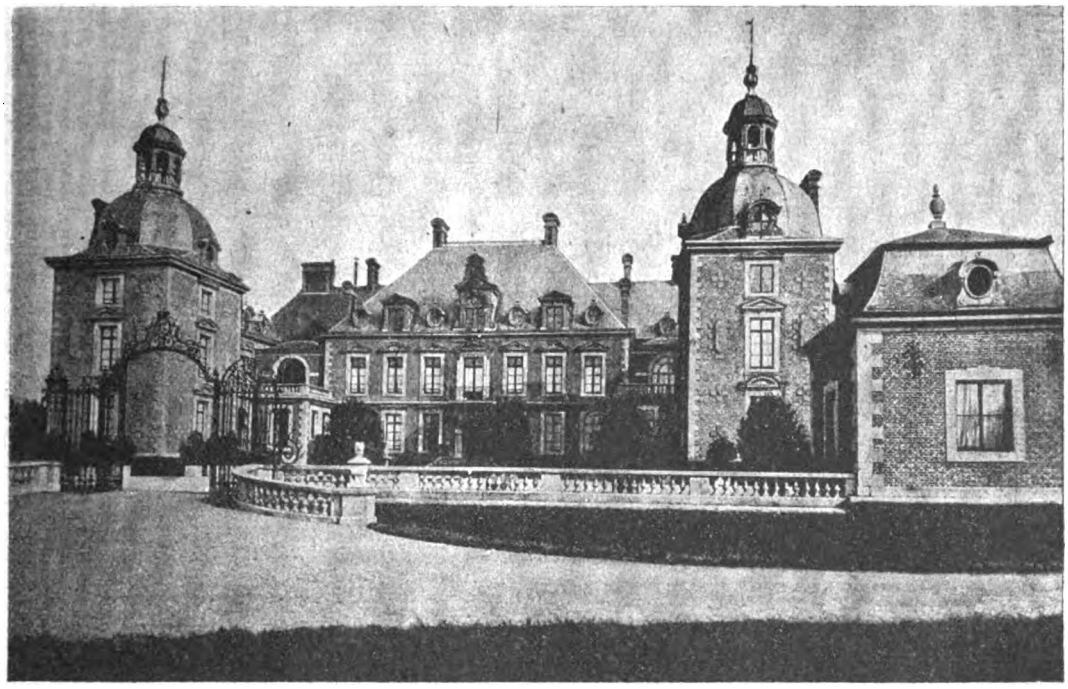
The largest shipbuilding yard in the world, situated at Hog Island on the Delaware River, outside Philadelphia, U.S.A., is nearing completion and covers nearly 900 acres. There are 50 slipways, which extend for a mile and a quarter of the river front, and seven outfitting piers, each 1,000 feet long, and which extend for another mile of frontage. Each pier can berth four ships at a time for fitting out.

The Royal English Arboricultural Society held their meeting last week at Hawarden Castle, Mr. Henry N. Gladstone presiding. In his address Mr. Gladstone stated that it was evident that but for private woodland owners the State would at this moment be in a bad way, and a great debt of gratitude was due to private owners for what they had done during the last fifty years. Hitherto woods had been planted for amenity and fame, but the war had proved that we must have a great reserve of timber. We were losing the bulk of our woodlands now. Soft woods were going rapidly, and the estimate was that by the end of this year we should have very little left. Now we had to turn our attention to replanting and re-afforestation. He urged that in the future we should work our woodlands on a sound, economic basis. It would take time, and could only be done gradually. It had to be done but could not be unless they received encouragement from the State.

Mr. Duchesne, honorary secretary, announced that Major G. L. Courthope, vice-president, was detained in the House of Commons in view of the afforestation question being raised, and the conference decided to telegraph to Major Courthope emphasising the importance of immediate preparations for afforestation after the war, and the national importance of every encouragement being given to estate forestry, the meeting considering an early decision of Government policy to be most essential in the national interests.

Liverpool's memorial to those who have fallen in the war is to take the form of a memorial chapel in the cathedral, and this we announced in a recent issue. The cost is estimated at £50,000, and the design of the chapel and its ornaments has been prepared by the architect, Mr. Gilbert Scott. Monday's "Liverpool Courier" gives illustrations of the cenotaph and grylle to be erected, and in a special article appealing for donations it makes the following statement:—

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NEUVILLE.—THE CHATEAU OF THE BELGIAN CROWN PRINCE.

"It is for this that the appeal is made. 'Appeal!' The word is incongruous. What is offered is an opportunity to each of us to be honest with our dead. No nobler memorial, none more suitable and permanent, none more accessible to the people could be devised than that which is intended. For the memorial is to be a transept in the new cathedral, forming a complete chapel where the names of those who have fallen will be recorded for all time, where the colours of local regiments will be hung, and where memorial and anniversary services may fittingly be held. It is intended that the boundary between the chapel and the main building shall be marked by a grylle of open metal-work of beautiful and delicate design.

"Standing on a low platform of black and white marble in the centre of the chapel will be an alabaster cenotaph or tomb, significant of much. That the cenotaph itself will be worthy in design the picture that we give to-day in another page will well suffice to show. Upon this cenotaph will rest, protected so that it will endure through the ages, a volume in which the names of our heroic dead will be inscribed."

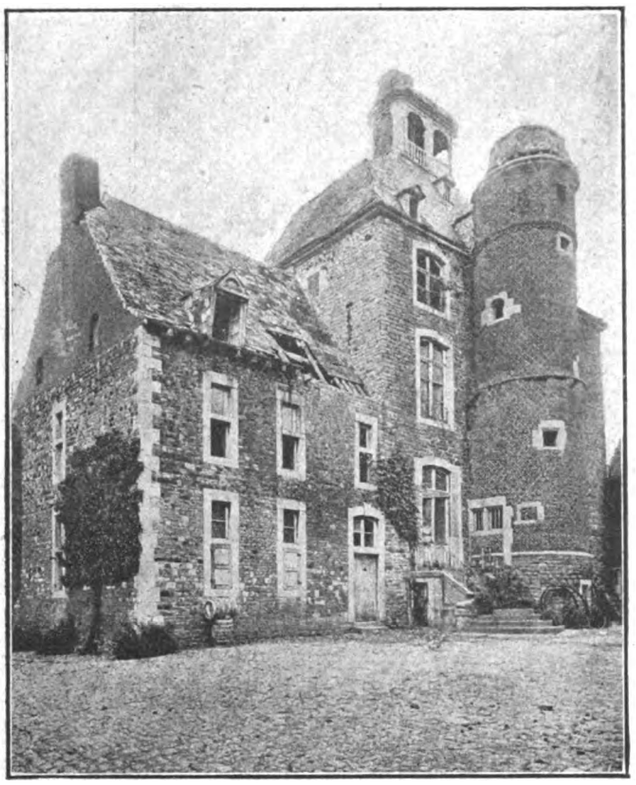
The generous offer to provide a gallery for modern foreign art in London has been made by Mr. Joseph Duveen to the trustees of the National Gallery and the First Commissioner of Works. Mr. Duveen has undertaken to provide the funds to enable the building to be commenced immediately at the close of the war. We are informed that plans for the building are already under consideration.

A recent issue of the "Daily Telegraph" contained an interesting article on "War Memorials." The "Observer" for Sunday last had an article by Mr. Wilfred Whitten entitled "The Stones we Must Raise"; both articles advocate the extension of Westminster Abbey. "Such a building, devoted to tombs and flags, and isolated elsewhere than at Westminster, has been proposed, and I can imagine nothing more chill or more alien to the nation's real feeling. We are not even now a warlike race, nor ever will be. We have proved that we are capable of earth-shaking war, but our whole inner purpose is to recover the noble proportions of life as they have been symbolised for centuries in Westminster Abbey. And our Overseas people will tell us that we can give the dust of their heroes and the records of their soldiers no honour comparable to their reception into the great parish church of the Empire in which all 'diversities of gifts' and all 'differences of administrations' have found their rest and memorial. The maternal grace of the Abbey was never so felt as to-day. When, in 1834, the old Houses of Parliament were in flames, which lit up half the Home Counties and brought tens of thousands of people to Westminster, an eye-witness saw that amid the dreadful pother the Abbey seemed asleep in the moonlight, unconscious of the glow that played along her buttresses. And thus she stands now in the lurid light of Armageddon —waiting."

Under existing circumstances the report to be submitted to the shareholders of the British Portland Cement Manufacturers, Ltd., must be considered to be particularly satisfactory. Despite all the restrictions placed upon the building industries, for the Directors to be enabled to meet all their standing charges for interest on Debenture Stock, to make their usual allowance for Debenture Stock redemption, to put aside a sum of £50,000 for General Depreciation account, £3,050 for Barge and Rolling Stock depreciation, and an item of £10,000 for Stock reserve, and to pay their preference dividend, with a dividend of six per cent. on the ordinary shares as against four per cent. last year, speaks highly for the effective management exhibited. It is proposed to carry forward a balance of £87,722 12*s*. 10*d*. as against £72,994 4*s*. 1*d*. last year.

A Town Planning and Housing Exhibition is being held in the Art Galleries and Museum, Rochdale, and will remain open until August 10. A feature is the number of Government housing schemes shown, together with drawings of areas town-planned in Bolton, York, Birmingham, Dublin, Rochdale, &c. At the formal opening by Councillor J. T. Dawson, Mr. Percy Lodge spoke on the subject of a Civic Survey of South-East Lancashire; Councillor T. R. Marr, of Manchester, on Town Planning and Housing, and Councillor H. Shawcross, Chairman of the National Housing and Town Planning Council, in moving a vote of thanks to the speakers remarked that the survey of South-East Lancashire was started soon after the war broke out to find work for architects who had been seriously damaged financially, and would prove of permanent value and assistance.

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VERLAINE.—THE CHATEAU.

ILLUSTRATIONS.

NORTHWICH POST OFFICE.

THIS building, owing to the subsidence common to the district, had to be built in a timber frame to meet the requirements of the Salt Compensation Board. Advantage was taken of this to erect the building in the half-timbered style common to Cheshire.

The sill of the building is carried on a steel frame to facilitate any subsequent lifting operations.

The building consists of basement containing store, heating chamber, &c. Ground floor with public office, postmaster's room, sorting office, &c. First floor to accommodate telegraph room, telegraph instrument room, and various retiring rooms. On the top floor accommodation is provided for the caretaker.

The contractors were Messrs. Bowers & Co., of Hereford.

THE PANTHEON, ROME.

THIS illustration is No. LVI. from Taylor & Cresy's "Rome."

With reference to the illustrations which have recently appeared of Ardenrun Place, we published last week a block view showing the work of Mr. Ernest Newton, and explaining that the additions were not the work of that architect; this would of course include the music room and drawing room which are situated in the new wing.

ART IN LONDON.

WORKS OF THE LATE SIR ALFRED EAST, R.A., P.R.B.A.

I AM not infrequently at variance with the prefatory remarks which are attached to catalogues of one-man exhibitions, as there is too often a tendency to, even an unbridled indulgence in, exaggeration on the part of the preface-writer. But Mr. A. L. Baldry, as it seems to me, is fully justified in the remarks he makes (in regard to the late Sir Alfred East's art) in a catalogue dealing with an exhibition of works now on view at the Fine Art Society's galleries in New Bond Street. Were I to say that in this artist's productions there is a lack of meretriciousness, it would be praise perhaps, but of a negative quality; in fact, there is a large-souled sincerity in East's paintings that differentiates them from so much contemporary work; he "gets there" every time, or nearly every time. There is an atmosphere, a luminosity, a tonality strongly in evidence; he was at one with his subject, and his simpatica is so pronounced that its action is telepathic. Even if at times his palette was dull, it was not dirty; as a rule however, even this note, which some might regard as adverse criticism, is silent. Other artists of eminence have subjected landscape to different treatment and technique, equally admirable but in no case superior to the best of Sir Alfred East's work. I think that there is nothing easier than for an art-critic to endeavour to obtrude his own personality where he should be satisfied to present the artist alone and to concentrate the limelight on the latter; and there is perhaps no readier method of so acting than by reference to individual works, attaching to them individual criticism. I wish to avoid this and will therefore merely say that were the exhibition to consist solely of "The happy valley," "The foot-bridge," "Golden autumn," "Château en Espagne," "Gold," "The silence of morning" and "The valley of the Chess," it would present a wealth of art rarely gathered together in a one-man exhibition.

HOW TO BECOME AN ARCHITECT.—I.

By A MAN WHO HAS BEEN ONE.

THE architect is, unlike the poet, made and not born. He is entirely the creature of circumstances—let him mould them if he can.

When the articles are signed and the premium paid and the youth fairly launched in an architect's office, he will find himself started on a long, long road, as long as that to Tipperary, which he has to traverse before he can claim to have become an architect himself. For his encouragement the following notes are written. And as example is always better than precept, I may have to quote many incidents in my own career, trusting to anonymity to hide my personality, or I may draw upon the published lives of other architects to point the moral and adorn the tale.

A youth of the age for "leaving school" who is not proceeding to one of the Universities should be old enough to select the profession for which circumstances or inclination have best fitted him; or by that age his parents or guardians, or at least his tutors, should know something of the bent of his mind and have some pretty clear idea of the life-work for which he is most suited.

Sometimes a youth has been brought up with artistic surroundings and that atmosphere of refinement in taste which in itself is half an education; or he may have been the son of, say, a butterman, but ambitious and with strong predilections, coming he knows not how, to an architect's profession. His circumstances form no barrier to his success, heavily though he may be handicapped by them; but he should be certain of his taste and know something of the difficulties which must attend his efforts, since it is better to be, at the end of his career, a successful butterman than a struggling architect.

On two separate occasions I met in Rome a man who showed considerable and informed interest in a certain phase of artistic life and work, although his conversation betrayed but little culture; and I afterwards discovered that he was a successful trader, the owner of many retail shops in London and the Provinces, who devoted every year a considerable sum of money to assisting young art students to study mediæval and renaissance work in Italy. His natural tastes might have led him to become an artist with dubious outlooks; his success as a trader did not kill his regard for art, but enabled him to assist many others to achieve their ambitions.

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The fact that a boy was "fond of his pencil" has induced many a parent to place his son in an architect's office only to discover when too late that the taste was ephemeral, to vanish before the tee-square and the set-square. Moreover, the most perfect of artists or even draughtsmen are not necessarily fitted for our business-like profession. The experience of J. B. Waring, than whom there was no better illustrator of architecture and the decorative arts, himself remarkable for his taste in colour, as given in his published life, is very much to the point.* "After this," he writes, referring to his failure in a competition, "I determined to try no more. I had done my best, had fitted myself by diligent and prolonged study of my profession for producing works of art which might have done credit to myself and my employers. I had always acted upon the maxim of La Bruyère, 'Nous devons travailler à nous rendre très dignes de quelque emploi; le reste ne nous regarde point; c'est l'affaire des autres.' But it was a mistake; in this age of competition, unless artists are of known and approved merit, they are obliged to seek for business like other people; the public will not apply to anyone unless he has a name; and in architecture, especially where it is impossible for a man to show what he is capable of, not to seek employment is to court neglect."

As with solicitors who have already established a family business, their sons, if of average capacity, may after their death "keep on the business still," so with architects, whose connection is even more personal, who have got one together, public or private, their sons and their sons' sons, as we know by many examples during the last century, may carry on the same practice to higher and more successful achievements.

Not infrequently some accidental circumstance may implant the initial desire of a youth to become an architect, and the favourable conditions in which he is placed bring it to fruition. The idea first came to me almost as a vision when, during a school holiday, I saw the chapter-house doorway of Southwell Minster; and the atmosphere was supplied by the tales of a grandfather, who had also been an architect, and who left behind many books, casts, and instruments, some of which I to this day use, but unfortunately no practice to which I could succeed.

The decision having been definitely arrived at that the youth is to be made an architect, the first thing to consider is how he is to achieve his purpose. Once there was only the straight gate of apprenticeship by which to enter the professional path, but now climbing over the wall is not only permitted but encouraged, and official and recognised ladders may now be used to surmount such an old-fashioned difficulty.

The benefits of proper apprenticeship are manifold. With the driving force of a premium paid and the direct control of a legal master come more steadfastness in the pursuit of knowledge; the benefit of another's example and experience in practice and professional duties; assistance and guidance as difficulties of all sorts arise; an outlook gained on general procedure only to be obtained by having the run of a working office; the early association with men who have already gone through the probationary stages and are perhaps in practice, more or less, on their own account; and, beyond all, an early appreciation of that esprit de corps which is essential to all professional success.

The disadvantages of "climbing over the wall" as a short cut are as numerous, if much less tangible. Take the case of the pupil educated for the profession in "the schools"; and there are numerous important institutions in London and the Provinces undertaking to teach their students, in a few courses, drawing from the round, geometrical drawing and perspective, and the elements of architectural design and construction sufficiently to pass, at least, the intermediate examination of the Institute and be on the high road for its associateship. But the acquirement of all these things implies close attention to the classes, lectures, &c., a difficult thing to ensure where there is no compelling authority to secure the student's continuous attention. In the schools the pupil has to have his knowledge pumped into him; in the office he inhales it with his breath or absorbs through the pores of his skin. And when all is said and done, I venture to say that an architect's office boy of twelve months' standing and average ability has acquired more practical insight into professional work than many a prize student turned out by the schools.

An office boy is frequently called upon in times of stress to help on the tracings, and by that means learns a great deal about planning, construction, and design, and, above all, to be very exact in his work. Nothing has a greater educational value in the teaching of design and style than carefully tracing published drawings of fine buildings, and nothing makes the eye more sensitive in drawing and perspective or trains it with equal exactitude. Yet at South Kensington not only is tracing discouraged, but, in the Art Library, absolutely forbidden. I am perfectly sure that a student who has carefully traced an architectural drawing has a greater and more accurate appreciation of the work it displays than it is possible for anyone to acquire who, with the drawing propped up in front of him or perhaps covered with a sheet of talc, attempts in such a manner to copy it. The eye has to be taught to see the things before the hand can draw them; and tracing leaves nothing to chance.

When I was a pupil my master had occasionally to lecture on architecture and required diagrams for the purpose; and I was told off to make tracings for the purpose from books he had selected at the Institute library, often of a character not ordinarily brought before a student's notice. The amount of knowledge I thus acquired in working for him I quite appreciated, and continued tracing on my own account; I thus worked on Cotman's etchings in Normandy, and while tracing his drawings incidentally learnt something of pen-and-ink work as well.

The attitude of the South Kensington people towards tracing may be accounted for perhaps in this way. The educational authorities regard it, mistakenly, as I believe, as somewhat in the nature of "cribbing," and an illegitimate short-cut to knowledge—which seems, on the part of those engaged in hoisting their students "over the wall" into the profession, a piece of *tartuferie*; and the interdict is encouraged by the Library authorities, who do not care to see their valuable books of plates too much fingered by the male and female students of the architectural schools—though the same students may be seen using their splashable water-colours in close proximity to decorative painting copies.

Any talent that a boy may show in his drawing should be by all means encouraged; but the drawing usually taught at an ordinary school is generally so much time wasted. Drawing is one of those requirements of modern life that seems natural to everybody now, and, though latent in most, will come almost at call in case of necessity. If he has not attempted to draw before, he will soon find that he must when he starts in an architect's office, and his sketches and drawings will be made with decreasing difficulty as his own tastes or requirements suggest. In my own case, except for a few lessons in water-colour from John Varley, I had no direct teaching; but my master was a remarkably good sketcher, and he turned me out, almost weekly, to do some sketching—at Westminster Abbey generally—*and criticised the result*, and he always insisted on seeing the work of my annual tour, notes as well as drawings, even when I was "out of my time."

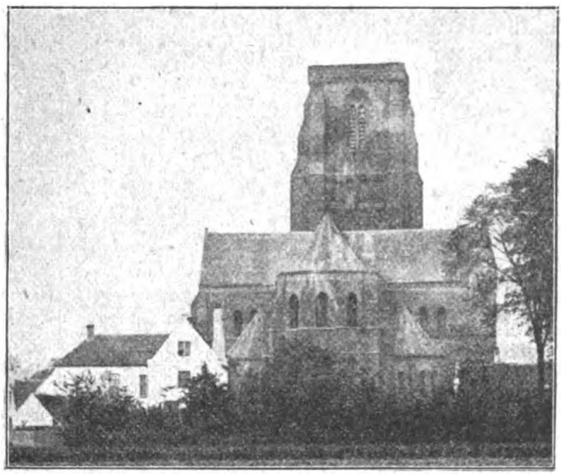
* "A Record of My Artistic Life." By J. B. Waring, 1873. Page 311.

THE London County Council propose to insure the following memorials against damage during air raids: Boadicea statuary group, £8,000; Gladstone Memorial, £6,000; Besant Memorial, £500; Bazalgette Memorial, £500; Cleopatra's Needle, £10,000; and the Shaftesbury Memorial Fountain, £5,000.

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LISSEWEGHE CHURCH BOMBED.

THE evening papers of July 23 reported that owing to the enemy using the tower of Lisseweghe Church as an observation post, we were obliged to drop bombs on it, killing and wounding many marines and a number of civilians.



Lisseweghe is about three miles inland from Zeebrugge.

THE BRITISH ASSOCIATION OF TRADE AND TECHNICAL JOURNALS.

AT a meeting of the British Association of Trade and Technical Journals, held at the Connaught Rooms, Mr. Iliffe, O.B.E., being in the chair in the unavoidable absence of Mr. Standring, the Right Hon. G. H. Roberts, M.P., delivered an address in which he described the work done by the Government in promoting Joint Industrial Councils, on behalf of which work he solicited the support and help which the trade and technical journals were in the best position to give in removing prejudices and influencing public opinion.

We have seldom listened to an address from any politician which was more entirely free from narrow partisan views and prejudices, and it would not be saying too much to state that much of what Mr. Roberts had to say was inspired by genuine statesmanship, while not a sentence used by him could be described as an appeal to the sectional interests of any class.

Commencing with a statement that at the beginning of the war he put aside all questions of party in order to work with and for our common country, he drew a moving picture of the industrial necessities which would face us at the conclusion of the present struggle, the necessity of finding and keeping new markets, of perfecting our industrial methods and processes, and emphasised the danger of being unprepared for the problems which would be brought in the train of peace as we were for those of the present war.

The great problem which must be solved was, he said, that of the relations of employers and employed, for if after the strife of war industrial unrest followed, the doom of this country as a great power for good in the world would have set in. We had among us those who though unwilling to fight the common foe talked of setting up barricades in the streets in a class conflict, but such sentiments were horrible to him. Pressure should be brought to bear on two sections—the reactionary employer and the wild, irresponsible workman—to compel them to settle their differences for the common good. The principle of Joint Industrial Councils, which he explained briefly, was based on organisation both of labour and capital, such organisations being frankly accepted by both sides. We had suffered for want of such organisation in the past, and only by its use could we discover the fundamental points on which labour and capital were in agreement. It was useless to think that we could any longer adhere to the old rule of thumb methods or imagine that we could [illegible] through, and the more the Joint Standing Councils could take into their hands the less need would there be of Government control after the war, which he agreed ought if possible to be avoided. His personal experiences had been dual, as he had worked in both capacities, and knew both the trades union associations and those of the employers.

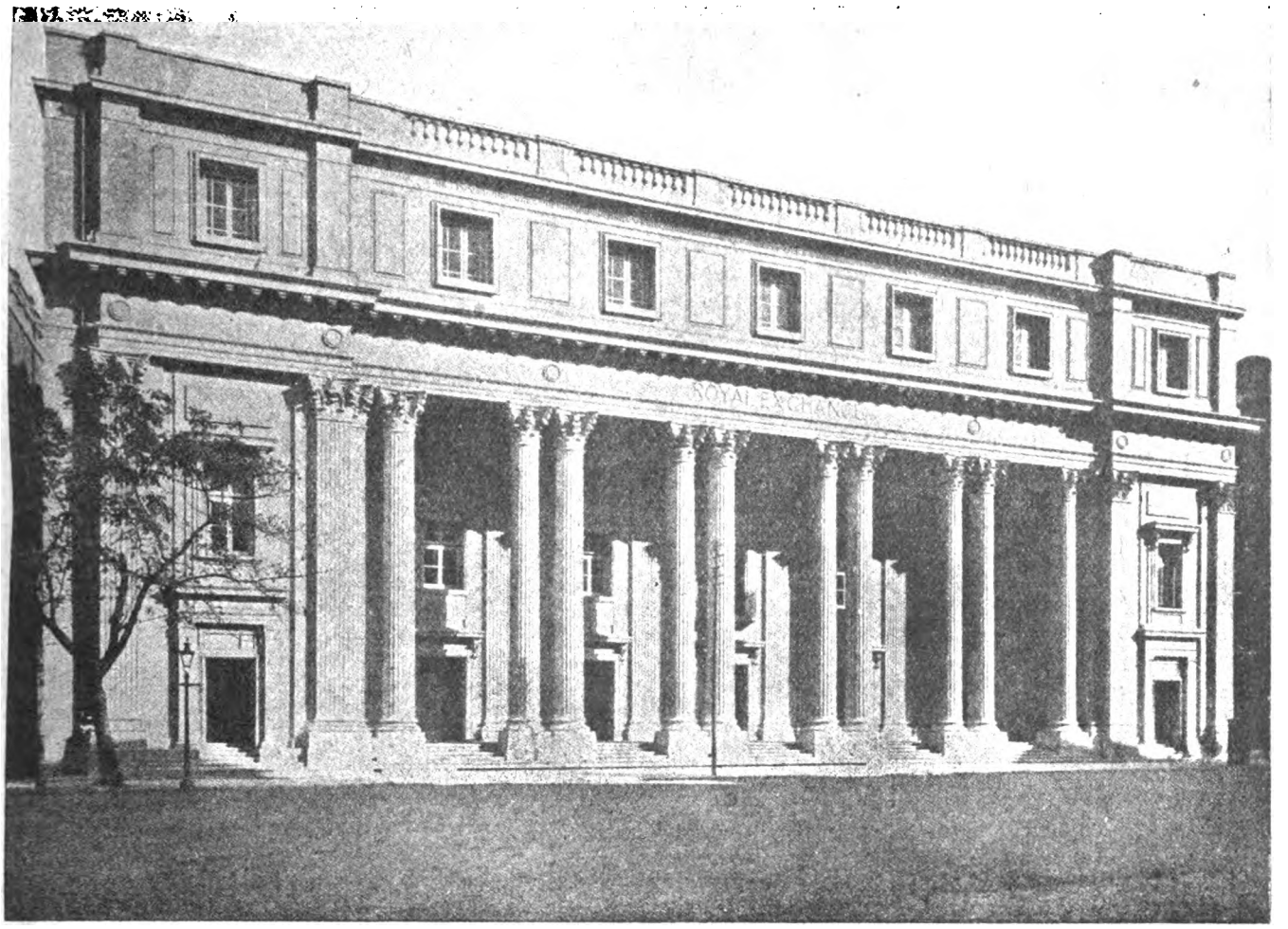
It was suggested that there was a far greater community of interest between the two sections than was usually thought, and though he had been told in some cases that agreement was impossible the supposed differences were found after actual contact to be capable of solution. It was the settlement of these differences which was absolutely necessary for the well-being of the community. He knew that specific industries could settle their own affairs best without Governmental interference, and that all that it was wise to do from Whitehall was to lay down general principles and take the credit as a politician for the results achieved by the trades themselves. He was a firm believer in the principle of decentralisation.

It would be necessary during the period of reconstruction for Government to confer with the trades, and such bodies as he referred to would be the authorities consulted. During the war the want of such organisations had been constantly felt. Once constituted his view was that they should be regarded as permanent institutions. The workman was entitled to good conditions, in which he could live in comfort and security, with good wages and more than bare necessities; on the other hand, they in their turn must learn to recognise that the employer should have his reasonable profits and that the limitation of output was retrograde and mischievous. He believed that a juster division of the wealth of the country was in the interests of all, for good wages and regular employment meant the development of the greatest market of all—that of our own country, which was in the interests of all of us. He wanted the workpeople through these Councils to obtain an insight into the principles of trade; many at present believed that the employers did nothing but sit in their offices and receive a shower of orders. Such men had no realisation of the employer's responsibilities and the work he had to do, and it was through such ignorance that trouble arose. Mr. Roberts referred in impassioned phrases to the past conditions of the agricultural labourer, a class from which he sprang, and declared that in entering politics he did it with the ambition of achieving something for them. But he found this to be impossible without studying the betterment of agriculture as a whole, and the more he considered such problems the less was he able to bind himself down to any one fiscal system. At the risk of being considered heterodox he had come to the conclusion that the welfare of each industry must be considered independently, and that being done he was prepared to support the application of the fiscal system which suited the particular industry in question.

Joint Industrial Councils were in operation in three trades, the pottery industry, the building industry, and the rubber trade. Four others would be commencing operations during this month. Seven more were almost constituted and would, he hoped, be in operation in a few months' time, and twenty-six others were in various stages of formation. The speaker terminated by expressing his hope that all would further the great work on which rested, he believed, the country's future prosperity. If they failed he believed the decay of the Empire was at hand.

No one who listened to a most eloquent and forceful address could fail to bear testimony to Mr. Roberts' singleness of purpose; no one could discover a vestige of self-seeking, political opportunism, or prejudice, and we feel his reasoning was sound and inspired by genuine patriotic feeling, and that if such a spirit can be instilled into workers and employers we shall be many degrees nearer to a prosperity in the sun in which we trust the miserable and petty jealousies which have often divided class from class will vanish in an atmosphere of real fraternity and genuine patriotism.

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NEW ROYAL EXCHANGE BUILDINGS, CALCUTTA.

The Paper Controller, Mr. Verney, moved a vote of thanks and made some humorous observations on the difficulties of his functions. Mr. Otto Thomas seconded the vote, which was carried with enthusiasm, and Mr. Roberts expressed his satisfaction at the reception accorded to him.

THE NEW ROYAL EXCHANGE, CALCUTTA.

WE give a view of the new Royal Exchange Building, Calcutta, the latest addition to the buildings of that city. Our contemporary "Indian Engineering" describes it as follows:—

The foundation-stone was laid by His Excellency, Lord Carmichael, on February 9, 1915, and the opening ceremony was performed by His Excellency, Lord Ronaldshay, on February 25 last. The total cost has been about Rs. 8 lakhs. One is first attracted by the massive loggia columns with their finished Corinthian capitals; they are of reinforced concrete with a clear height of 41 feet 2 inches, battered from 3 feet 4 inches to 3 feet. The reinforcement consists of eight one-inch steel bars supported at 12-inch intervals by ⅜-inch round stays, and a 6-inch down-take pipe in the centre of the column carries off the roof rainwater. Reinforced lintels rest upon the columns carrying a heavy wall and floor load, the maximum of which is 5 tons per lineal foot. They are reinforced against shearing stresses with bent bars, and top bars are used to provide for negative bending moments. Concrete in the proportion of one part cement to six parts aggregate was used throughout. The column loads are carried into a reinforced concrete foundation, which distributes the weight into a lime concrete base below. The soil on which the building stands was fortunately of a uniform nature and has not settled at all; one or two old wells and fillings were met in the excavation, which were easily dealt with.

Marble has been extensively used for the flooring of all the principal rooms, and the handsome main staircase with its balusters is entirely of this material. The interior decoration work is largely in plaster, the ornamental ceilings being worked in situ on metal lathing suspended from the floor joists and beams. The Corinthian capitals also were all modelled in position by skilled artificers working from a full-size plaster of Paris model supplied from Bombay. Other notable features are the fine doors and windows with their brass fittings, the marble gallery with cast-iron railing and brass handrail, the finished sanitary fittings and the lift. The furniture and fittings in the building, in the majority of instances, are also to the designs of the architects, and the work throughout has been under the personal supervision of both Mr. T. S. Gregson and Mr. H. Foster King, assisted by Mr. John H. Horniman, A.R.I.B.A., the latter acting as clerk of works.

The design is the work of Mr. T. S. Gregson, A.R.I.B.A., of the firm of Messrs. Gregson, Batley & King, architects, Bombay; the building contractor was Mr. J. C. Banerjee, of 21 Canning Street, Calcutta.

ON a site granted by the Tyrone County Council a memorial has been erected to the memory of the late Private Robert Morrow, V.C. The monument has been designed by Messrs. Purdy & Millard, Howard Street, Belfast, and is 12 feet in height, of finely axed Newry granite standing on a 3-foot 8-inch square base surmounted by two unpolished bases. The die stone, which is polished on the face, has in relief the crest of the Royal Irish Fusiliers surmounting the inscription to the memory of Private Robert Morrow, V.C., 1st Royal Irish Fusiliers, honoured by his King for gallantry at Messines, Flanders, April 12, 1915.

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THE METRIC SYSTEM IN ITS RELATION TO THE SURVEYORS' PROFESSION.—IV.

By Lieut. A. J. MARTIN (Fellow).

(Concluded from last week.)

BRIEFLY, the tables of equivalents between the International system and our present denominations resolve themselves into (1) practical equivalents, (2) scientific equivalents, and (3) something between these two, which may be termed "abbreviated equivalents."

I fear little will be done as regards organisation until an Act is passed, unless both Houses of Parliament first pass a resolution in favour of making the change. Then instead of each profession and trade having academic discussions on the merits of their own particular measures and weights, the merits of the International system of duodecimals, and so on, their energies would be concentrated upon doing their part to obtain a successful Bill and making suggestions for carrying out the reform.

The Cost.—Several years ago it was estimated that if the Government paid the cost of the reform it would cost only 100 millions sterling. At that time such a sum was thought by some to be impossible; we have now learned to look upon it as the cost of a fortnight of war. It is evident that we could have easily spent the amount. It is no good winning one war in the field and then losing another in commerce. In the above estimate was included the scrapping or altering of certain machinery which turned out articles to be sold by imperial weight or measure. This difficulty could be overcome by selling such articles at per article instead of by weight, but in the meantime our foreign trade would be suffering, as customers *do* prefer the 10 per cent. larger articles. Often have the commercial travellers of our rivals in Europe and in distant climes advertised this fact whilst we slept. There will be other machinery to be altered or scrapped; in some cases it will in any circumstances have to be scrapped after the war, so now is the time for the Government to declare its intentions with regard to reform. Much machinery is metric already, although described in nearest imperial equivalent. The expenditure would be necessary whatever reform was adopted, but it would all be spent at home, and would be extended over a period. All sorts of schemes are being prepared to find work for our returning soldiers and sailors. Let it be work that will permanently advance us, and the expense of which will cease when completed, as distinct from the creation of works which will mean an annual expense to keep up.

The Measures and Weights of our Forefathers.—For upwards of half a century we have been abandoning or altering nearly all the measures and weights of our forefathers. In these days, and more so in the coming days, we must have up-to-date weapons of commerce, or lose to an up-to-date power or collection of powers who have already made the change and gained ground ever since. It follows they will soon be outstripping us if we do not "wake up," as our present King once advised us to do.

If I have seemed biassed in my arguments, I would point out that I have taken my stand on the following grounds:—

(1 That the metric system is international and already largely used in the United Kingdom;

(2) That the Council of this Institution in 1907 passed a resolution supporting the efforts of the Decimal Association to bring about the reform;

(3) That I do not consider our present units good enough for a commercial conflict;

(4) That varied opponents of the International system have for many years combined against it, but no one yet, although repeatedly challenged, has produced in black and white complete tables which they think surpass the International and should replace our own;

(5) Consequently, therefore, having before me but one system, namely, the International, the details of which have been fully worked out, and which have been adopted by many nations, the only alternative to remaining as we are is to adopt that system.

There can, in my opinion, be no hesitation as to which course is preferable.

It would have been easier to change years ago, but the war presents a favourable opportunity; a change will become more and more difficult every year, and then it may come too late. A great responsibility therefore rests upon us at the present time. We must not be misled by those who see the necessity for a change but who will not say what it shall be. If it becomes a question of voting on the question, it should be on the principle of an alternative vote. For instance, there may be a proportion of the meeting in favour of no change, or of no common radix, or of no inter-relationship, or who favour, for instance, the inch or mile or the grain or ton as the fundamental standard; or others who would ignore the world's system of counting and favour a Binary system; while others may wish for a Duodecimal system; and so on *ad infinitum*.

Combined these opponents may seem in the majority, for it is easy to oppose; but it is difficult to elaborate a system which will cover all the essentials as I have called them.

To sum up the whole question of "essentials" of the proposed reform, let us once and for all realise that we must retain the natural horse-load or ton, and that the side of a cube of water weighing 1 horse-load must be the length of a meter or thereabouts. It follows, therefore that the length of a meter, or thereabouts, must be the fundamental unit from which all other units are derived. Further, common-sense dictates that if we once decide to increase the length of our yard it would be ridiculous to alter it to a length which would be a mere trifle, more or less, than the meter, instead of to the meter itself. Considering that the meter is already to some extent used in the British Isles, we could not have an independent measure of length which would be within, say, $\frac{1}{8}$ of an inch of the length of the meter, either way, just because there was a difference of opinion as to what the average horse-load exactly was.

In conclusion let us ask ourselves:—

(1) Shall we remain as we are?

(2) Shall we adopt a common radix, or keep the multiplicity of factors as at present?

(3) Shall the measures and weights be inter-related, or does it not matter?

(4) Shall the radix be 8, 9, 10, or 12?

In answer to these questions I would point to the calculating machine.

We can also ask ourselves:—

(5) Shall we set up a new system for ourselves differing from that of our customers?

(6) Shall we render useless the teaching of the International system in our schools for many years past?

(7) Can we ever rid ourselves entirely of the International system? And if not, shall we have two distinct systems of measures and weights in force?

(8) Shall we let the component parts of the Empire slowly drift further and further away, because we do nothing? Or,

(9) Shall we take steps to maintain and improve our position and the unity of the Empire, and even to advance the federation of mankind by adopting one language in commerce?

THE LONDON ELECTRIC RAILWAY.

AT the Surveyors' Institution, on Friday, July 19, Mr. H. F. Lofts, F.S.I., as Arbitrator, heard a claim against the London Electric Railway Company for £3,209 16*s.*, as purchase money and compensation in respect of the compulsory acquisition of certain land in the district of The Broadway, Westminster, under Parliamentary powers. The claimants were Mr. Henry Charles Wheeler (the freeholder) and his mother, Mrs. Caroline Jessie Wheeler, who is tenant for life.

Mr. Herbert Jacobs was counsel for the claimants.

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while Mr. H. W. Liversidge represented the railway company.

In opening, Mr. Jacobs explained that Mr. H. C. Wheeler was carrying on a coal and wheelwright's business on the property, and a claim by him in respect of this trade had been agreed at £500. It had been further agreed that the Arbitrator should be asked to add that amount to his award, but to show it separately. Therefore the only question in issue was the value of the land. The property was freehold, and was known as 16 St. Ermin's Hill and 5 and 6 Maundy Place, and formed one connected site. The total agreed area of the site was 2,052 superficial feet, of which 320 feet were subject to certain restrictions appearing in a conveyance by the Metropolitan District Railway Company to Mr. S. R. Wheeler, the father of the freeholder. In this conveyance there was a reservation at all times to the Metropolitan District Railway of the line of railway and the tunnel under this portion of land, with the right to make any excavations that might be proper, and an agreement that no buildings should be erected without the previous consent in writing of the engineer of the company. A further deed gave the right to the District Railway to raise the height of its buildings abutting on the land in question, and a corresponding right to Mr. Wheeler to raise his buildings to a similar height. The rest of the property was subject to the ordinary restrictions as to light. The property was untouched by the extensive development which had taken place all round it. It was almost an island in the midst of fully developed building. Counsel argued that weight should be attached to the fact that an offer for the site was made by the proprietors of St. Ermin's Hotel (which was close by) some years ago, and that the presence of this hotel, and its special needs, should be borne in mind in arriving at the market value of the land.

Mr. H. C. Wheeler, the freeholder, said that in 1897 he refused an offer of £5,000 for the freehold of the property, which was made to him by Mr. Flood, acting on behalf of the Mansions Proprietary Company, who owned St. Ermin's Hotel. Subsequently he was offered £5,500 by Mr. Richardson, the managing director of the company, which he also refused. At the time he told Mr. Richardson there was a passage-way that could not be built over.

Mr. Frank C. N. Flood, surveyor and estate agent, gave evidence as to making the offer of £5,000. In February 1898 the whole matter was dropped as Mr. Wheeler would not reduce his price beyond £6,500.

Mr. W. H. Mills, partner in the firm of Messrs. George Trollope & Sons, auctioneers, surveyors and estate agents, gave evidence for the claimants. He valued the area of the site which was not the subject of any restrictions, namely, 1,732 feet, at 30*s.* per foot, which amounted to £2,598. He valued the restricted area of 320 feet at £1 per foot, or £320, making a total of £2,918. He added the usual 10 per cent. for compulsory sale, equal to £291 16*s.*, making a total of £3,209 16*s.* as the purchase money and compensation payable. The site was and had been for many years ripe for development, and obviously formed part of the island block. Witness had bought land in the back streets of Westminster at 30*s.* per foot; of course, in the best streets the price would be £10 or £11 per foot. If he knew for certain that someone wanted the property his valuation would be larger. He had simply put what he considered the market value. He had heard for the first time that day of the offer from St. Ermin's Hotel, though he himself made an offer for the property in 1915, when he was authorised to start with £4,000. In his opinion the site was much more valuable than it was twenty years ago. There was much more property awaiting development twenty years ago than there was now. He thought the site might be used for offices, and it was practically the last site that was left in an important area where much building had taken place.

Mr. H. M. Rogers, senior partner of Messrs. Rogers, Chapman & Thomas, auctioneers, surveyors, and valuers, of Belgrave Road, South Belgravia, submitted a like valuation of £3,209 16*s.* In cross-examination, Mr. Rogers said he did not know that the Maundy Place property was sold by auction to the freeholder's father in 1874 by the District Railway Company for £200. That, however, would not affect his valuation. He had sold land at auction in the last ten years which had since been sold at double the price.

This was the case for the claimants.

Mr. Liversidge, for the Electric Railway Company, said there were three more or less tumble-down houses on the site, which was subject to restrictive covenants which, he suggested, made its development extremely difficult. The value the Arbitrator had to assess was the value it was worth to the claimants at the time the notice to treat was served, namely, in January 1916. It was impossible to deal with the land as part of a larger site. It practically had not got a single frontage that was not affected by claims for light, and the restrictions were of a serious character.

Mr. Samuel Walker, auctioneer and surveyor, of Moorgate Street, E.C., gave evidence for the railway company. He valued 1,732 feet at 15*s.* per foot super., or £1,299, and 320 feet which were subject to restrictions, at 10*s.* per foot, or £160, making a total of £1,459. He added 10 per cent. for compulsory purchase, equal to £146, making the purchase money and compensation payable £1,604. The area which had no restrictions had a frontage of only 28 feet to St. Ermin's Hill. He did not think he could find a worse site for offices in Westminster. If offices were erected there he did not believe they would let.

In cross-examination, Mr. Walker said the property was a long way back, and was surrounded by ancient lights. He should not take anything as an offer which was made twenty years ago. In the City he had often seen men refuse an offer and then take considerably less. Property in Westminster had gone up in value only on account of the pressure of the war, and it would go back when the war was over. The Government would not require all the places they had taken under war pressure. Building land in towns had depreciated in value; he included building land in London. He had valued the site in question as it came to his notice, without reference to its development with adjoining property.

Mr. Liversidge said there were twenty different interests in the locality on which the Electric Railway Company had served notices to treat. In the larger area to which Mr. Mills had referred counsel thought there must be hundreds of interests.

Mr. Jacobs: I am only discussing the site to be acquired by the company under the Act. There are only four freeholders.

Mr. Liversidge: But there are any number of leaseholders.

Sir Alexander Stenning, surveyor and architect, of Cannon Street, E.C., said the land in question was of awkward and irregular shape, and shut in by higher buildings all round. He had heard about this being part of an island site, but, as Mr. Walker had said, it was the back part. As regarded the piece of land to which the restrictions applied they could only put up a building equal to the present three storeys, and in modern building that would mean a basement, ground floor, and first floor. He had valued the whole site of 2,052 feet at 15*s.* per foot, or £1,539, and had added 10 per cent. for compulsory purchase, making a total of £1,692.

Counsel having addressed the Arbitrator the hearing of the claim terminated, and Mr. Lofts announced that he would give his decision in due course.

CAPTAIN REGINALD T. F. HEDLEY, Essex Regiment, a member of the firm of Hedley, Mason & Hedley, rating surveyors, Birmingham, has been awarded the Military Cross.

A SPECIAL vestry for the parish of Rickmansworth has authorised the Vicar and Churchwardens to apply for a faculty empowering them to convert the east and north sides of the parish church into a Lady chapel.

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THE TIMBER INDUSTRY.*

By Mr. PERCY GROOM, M.A., D.Sc., F.L.S., Professor of Technology of Woods and Fibres, Imperial College of Science and Technology.

THIS paper will mainly deal with the extent to which technical science can aid, or has aided, in promoting the timber industry in this country and the utilisation of the timber resources of the British Empire. Although it is obvious that practical details in trade will constitute limiting factors of the extent to which organised application of technical knowledge can be of immediate commercial and Imperial service, little consideration will be given to obvious practical questions such as the impending revision of the relations between employer and employee; the wisdom of improved organisation of the timber trade along lines that are in the interests of the trade, the nation, and the Empire; and the effect of tariff reform.

The special qualities of timber that render it all-important in daily life may perhaps be best understood if we consider the demands made on wood in the living tree, which is exposed to various vicissitudes during its prolonged existence. The wood at the base of a tree-trunk has to withstand tons of pressure per square inch, while the trunk has to resist the bending action associated with its columnar form and the shearing tendency of its boughs. The trunk and branches have to resist shock caused by gusts of winds acting on a large head of foliage. Yet the young wood of the twigs or outer parts of the trunk must possess a certain degree of extensibility and toughness, as opposed to brittleness, so that they can endure change of shape under shock. Since one essential function of the wood is to conduct rapidly water to the leaves, wood must necessarily contain water-channels, and therefore be an excavated not a solid material. And since the water conveyed contains substances in solution, wood is capable of impregnation by watery solutions of dyes and preservatives. Remembering the great heights attained by certain tree-trunks, and the immense load of branches, it is necessary that wood in the tree be relatively light in weight when compared with its strength and stiffness. Finally, it is evident that wood in the tree must possess a certain degree of durability.

These various qualities essential to wood, in order to make possible the existence of a tree, render timber a material having unique properties as regards strength, elasticity, extensibility, and above all confer upon it a general superiority to metals as regards comparative weight and strength. The feeble powers possessed by wood of conducting heat, the relative ease with which it is worked, and the great variety of timbers available, enhance its value and add range to the variety of uses to which it can be put as a structural material. Moreover, in certain situations, or when appropriately treated, wood is far more durable than iron; and can be subjected to processes by which it successfully withstands temperatures at which iron flows away as a molten liquid. Consequently as a structural material wood subserves purposes too familiar and numerous for enumeration.

When disintegrated it yields fibres that provide paper and cordage; while as a chemical complex wood is a fuel, and is the source of substances as diverse as charcoal, alcohols, acetone, formalin, artificial silk, turpentine, dyes, scents, and drugs.

New uses for wood are constantly being discovered and old uses being increased, so that with the advance of civilisation the consumption of timber per head of population steadily rises, despite its replacement for certain purposes by other materials such as iron and ferro-concrete. Hence in this country and the British Empire generally we know that there will be an ever-widening demand for timber.

* A Paper read before the Royal Society of Arts.

The amount of wood used by this country may be estimated by a consideration of the imports of 1913.

In 1913 the values of the imports of timber into the United Kingdom were:—

	£
Soft wood (conifer)-logs, sawn, planed, &c. ...	22,800,000
,, ,, pit-timber	4,400,000
,, ,, wood-pulp	5,425,000
	32,625,000
Hardwood, oak logs	1,700,000
,, wood manufactures	4,600,000
,, teak, mahogany, furniture, &c. ...	3,800,000
	10,100,000
Softwoods and hardwoods—total	42,725,000

In addition, there was consumed a large amount of wood grown in the United Kingdom.

The largest item is represented by softwoods, which grow in the north-temperate regions, and are actually exported thence to tropical and southern countries. In the British Empire there is therefore only one great source of supply, namely, Canada. The supplies of softwoods are steadily decreasing in amount and receding in accessibility. The depletion of supply is particularly marked and serious in reference to constructional soft-wood of large dimensions and good quality. At present Douglas fir (British Columbian pine), some pitch-pine in the United States, and some Scots pine in the recesses of Russia, represent such large timber. When these stocks have vanished they will probably never be replaced, because in modern forestry operations conifers in artificial forests are felled at the age of seventy to eighty years, as they then yield the optimum return.

It is therefore evident that the price of softwoods will continue to rise, and the more so with the increasing demands made by the growing southern nations in Australia, South Africa, and elsewhere.

What steps are to be taken to alleviate the threatened situation? In answer, four possibilities suggest themselves:—

1. Increased production of softwoods in this country, and the British Empire generally, by afforestation.
2. Partial substitution of hardwoods grown in British Colonies and Dominions for softwoods imported from foreign countries.
3. Maximum avoidance of loss and waste.
4. Further economy in the use of timber.

Dealing first with the last possibility, the question arises: Is this country extravagant in its consumption of wood? The answer must be in the negative, since the subjoined table proves that the annual consumption per head of population is less than that of any other great Power, with the solitary and small exception of Italy.

APPROXIMATE ANNUAL CONSUMPTION OF WOOD IN CUBIC FEET PER HEAD OF POPULATION.

United States	260
Canada	192
Russia	63
Austria-Hungary	57
Germany	36·6
France	24·6
United Kingdom	14
Italy	13

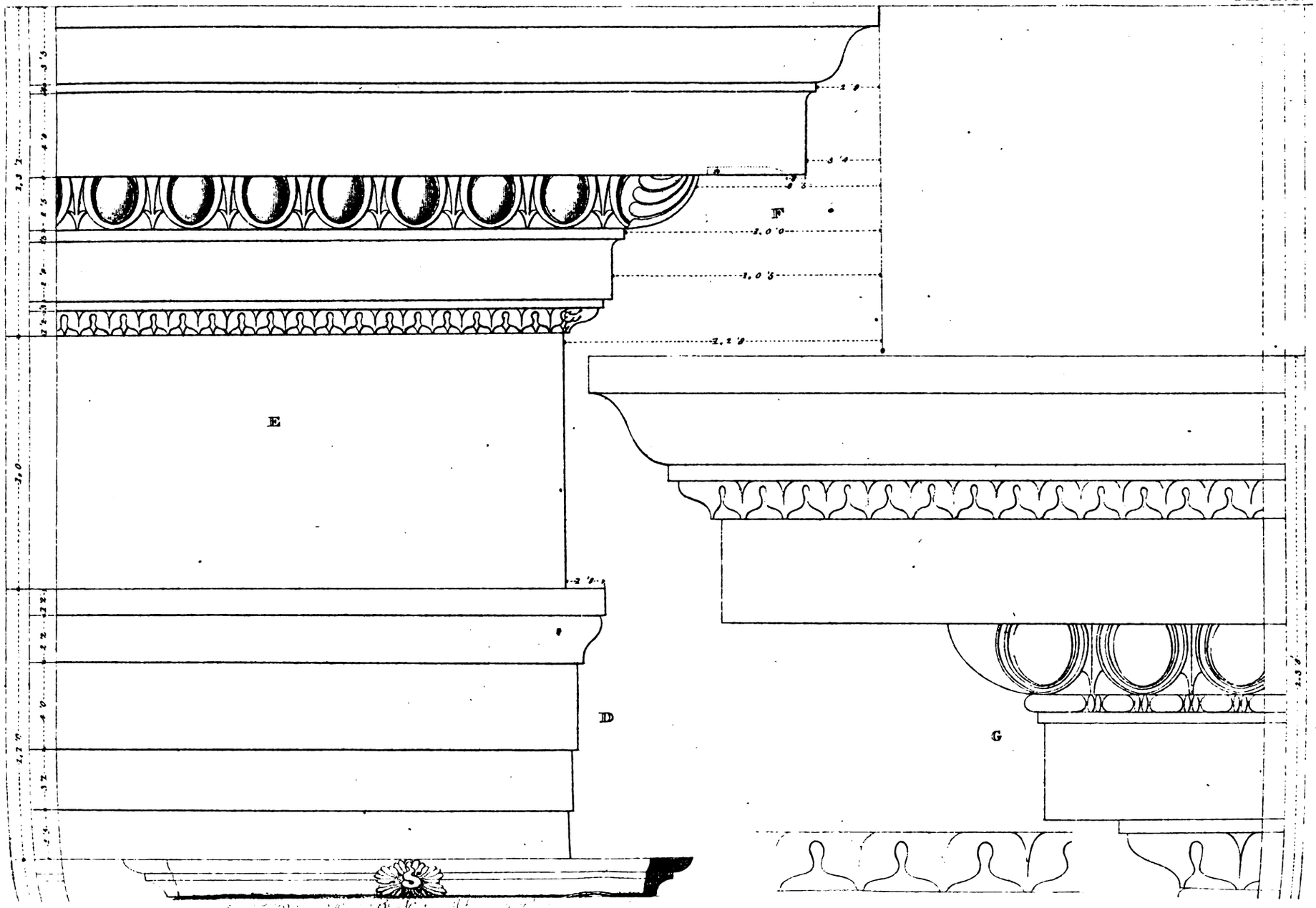
Although the consumption of wood in this country is not extravagant, I shall show later in this paper that not inconsiderable economy is possible.

The question of afforestation in the United Kingdom has been repeatedly considered by Governments. The scheme appealed rather to statesmen than to politicians, and as a commercial proposition promised only a modest return at a distant date. Recent experience has, however, introduced a broader outlook, which recognises the direct and indirect effects of forestry upon agriculture, rural re-population, and the defence of the country, so that sanction has been given to a scheme in Great Britain. Years ago I endeavoured to interest the War Office in a scheme of combining an increase in the Army

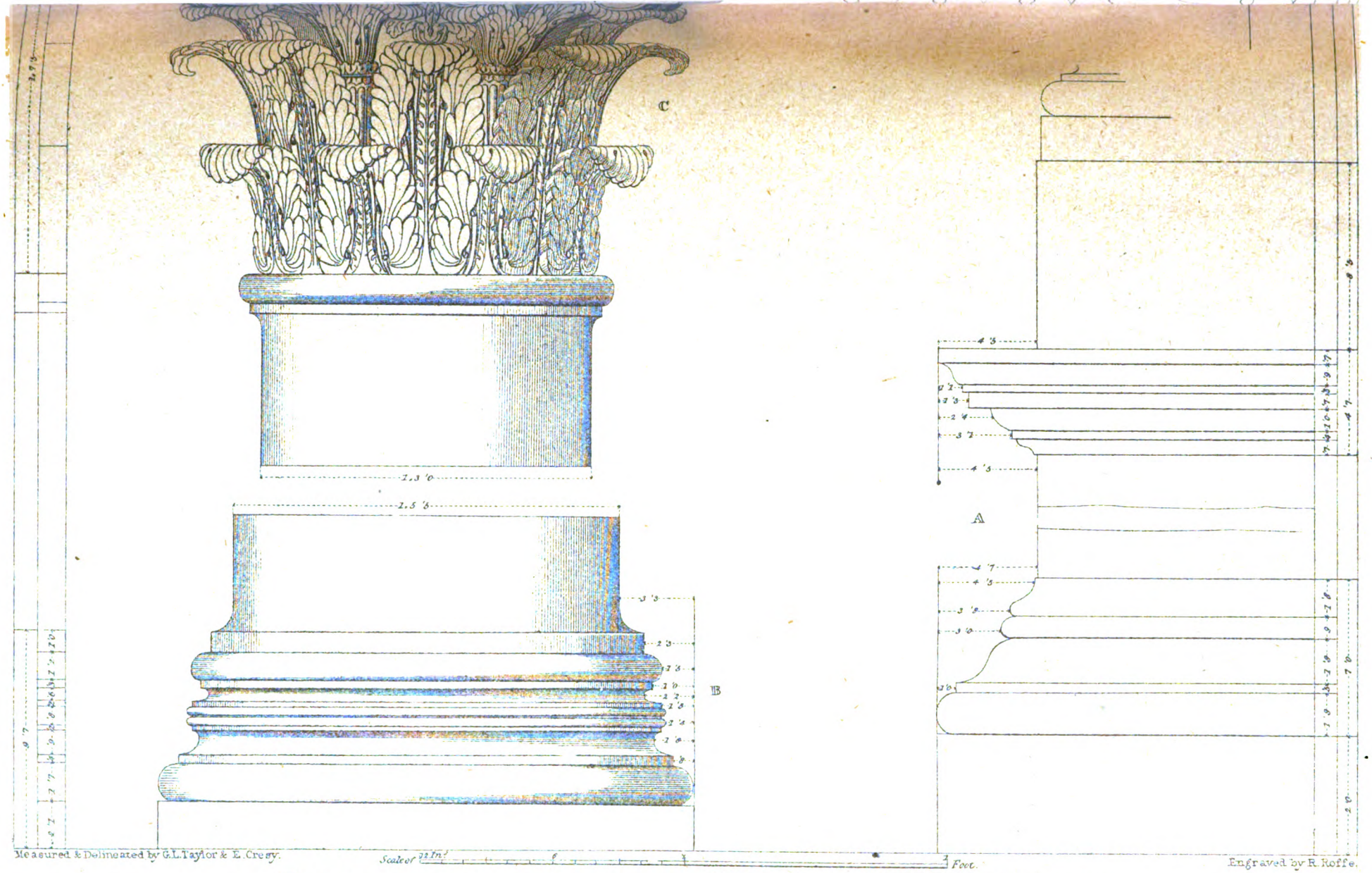
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Interior of the Pantheon, Rome.

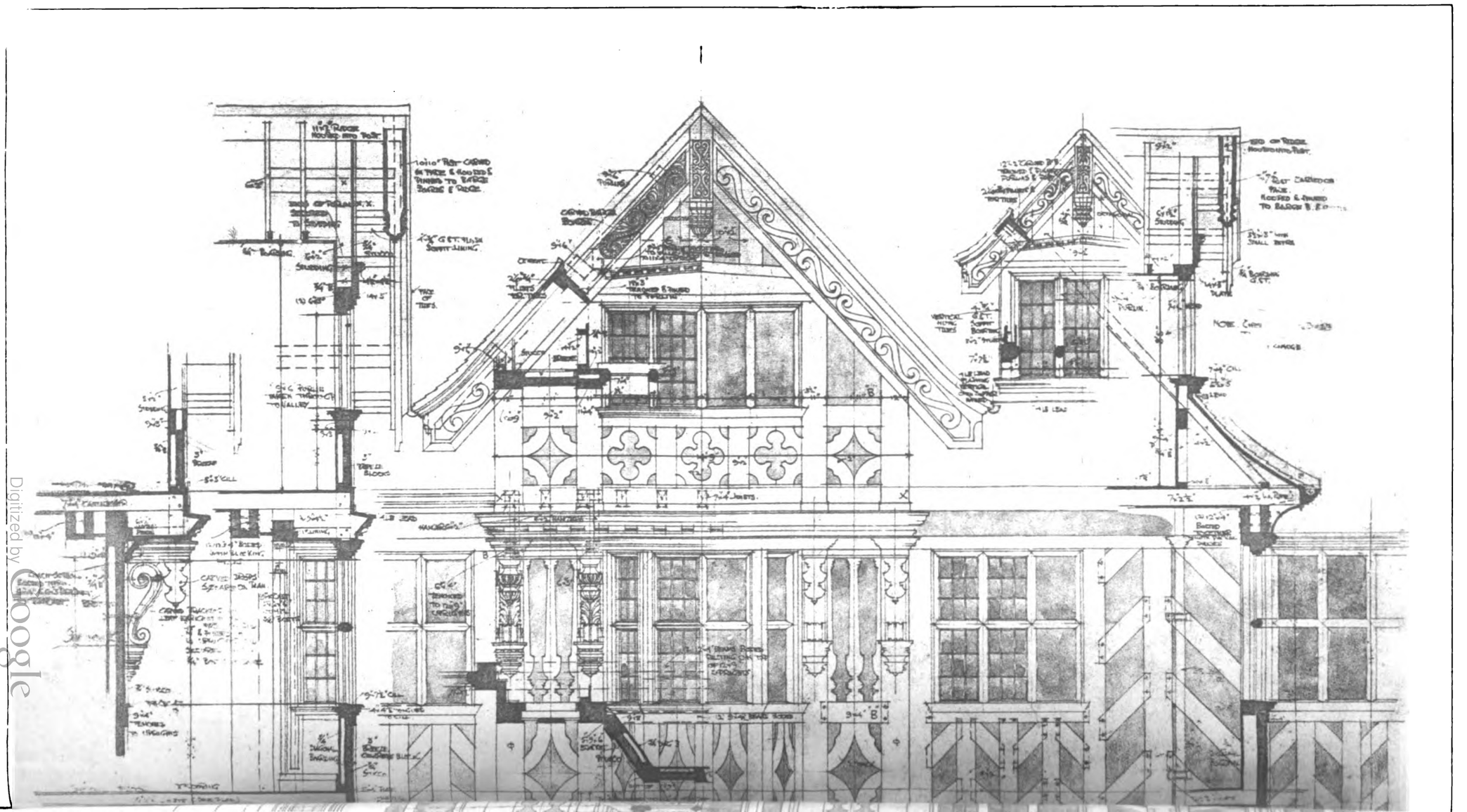
Details of the little Altars, & Attic Cornice.

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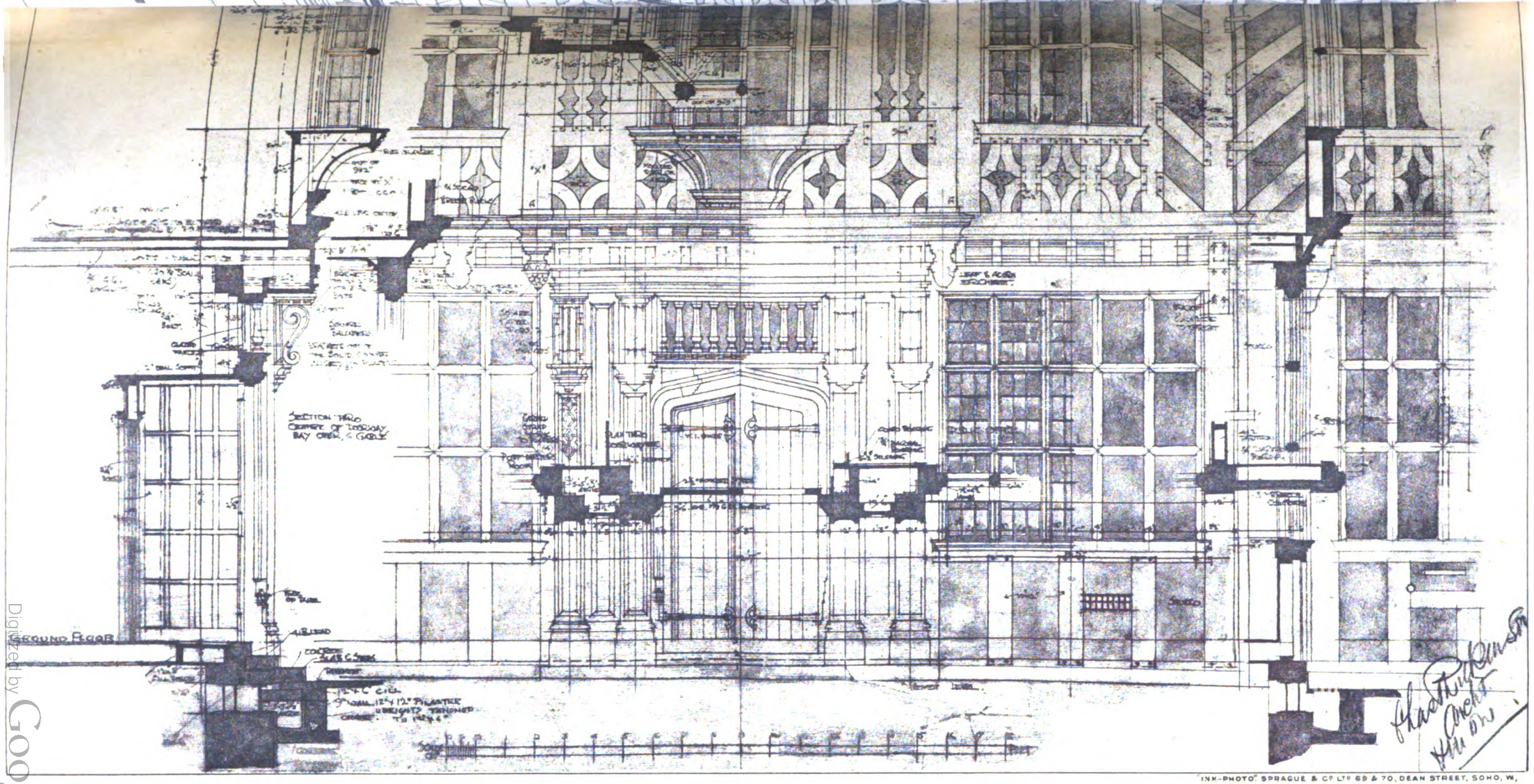
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MR. CHAS. P. WILKINSON, ARCHITECT.

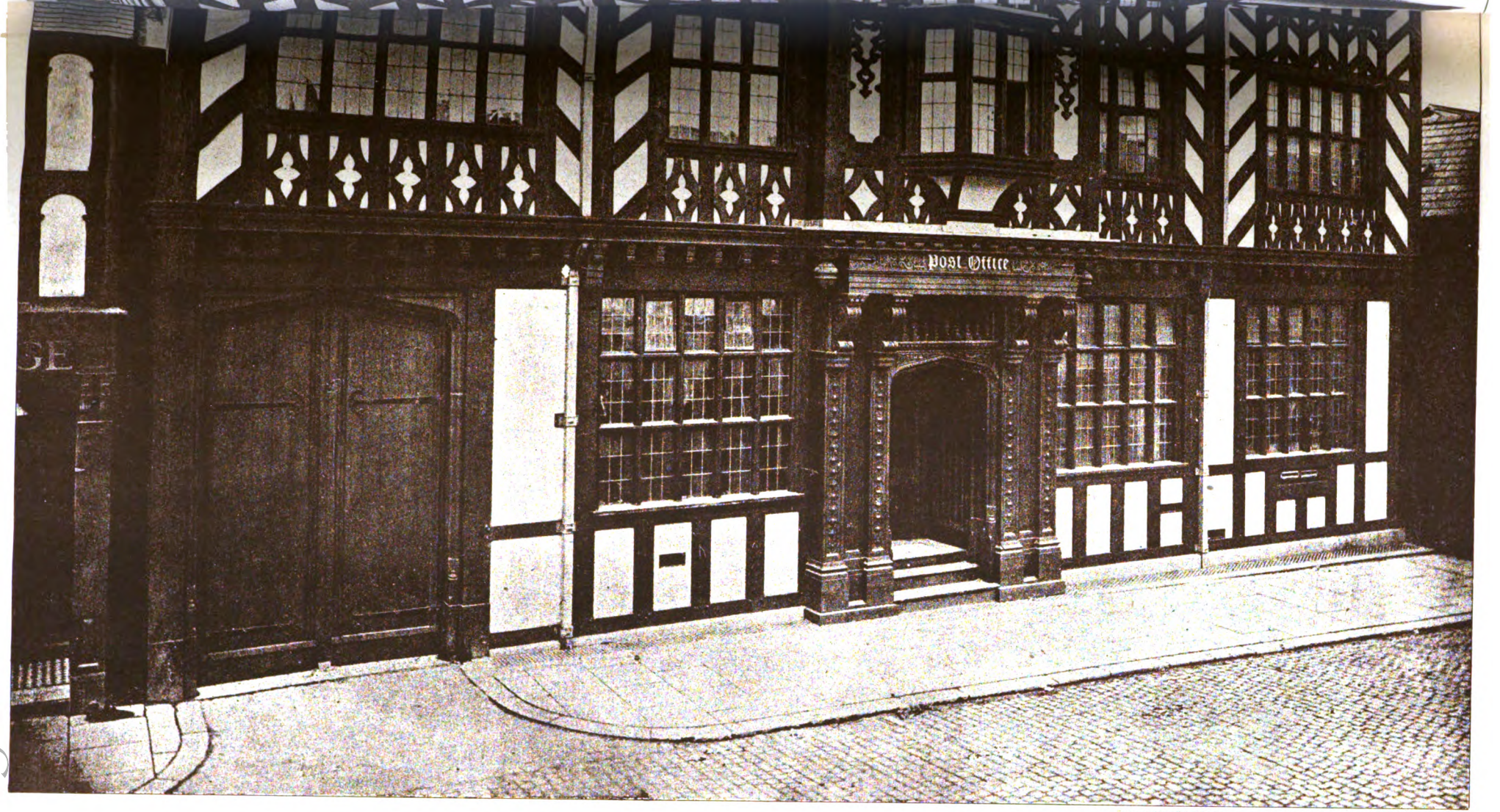
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with the initiation of afforestation that should be carried out by a staff mainly recruited from men who have served in the regular Army or were auxiliaries in the Army. It is to be hoped that some such plan, taking cognisance of the existence of the Royal Air Force, will be considered for adoption throughout the British Empire.

The success of any measures, including afforestation, designed to improve conditions in this country as regards the timber industry will depend finally upon the extent to which the pertinent scientific and technical knowledge is acquired and applied. The remainder of this paper will therefore be devoted to a survey of the fundamental facts and principles that have been learnt through research, and to some mention of problems calling for solution.

The chief, but not exclusive, problem of afforestation in this country is the successful production of coniferous timbers or softwoods. Great Britain, with its temperate island climate, is well suited for the growth of conifers, and, taking into consideration its ranges of temperature, altitude, and soil, I am of opinion that the British Isles are better suited than any other country in Europe for the cultivation of a wide range of conifers. The main question, however, is not the successful growth of the tree but the successful production of timber of proper quality; the former does not necessarily involve the latter. Yet we do know that good coniferous timber can be grown in this country. Years ago, by means of mechanical tests at the Imperial College, it was discovered that timber of Scots pine grown even in the South of England is suitable for paving the streets; while last year mechanical tests proved that not only in the South of England, but also in the Highlands of Scotland the Scots pine can yield slow-grown timber that is equal to the highest demands ever made on wood—namely, use in vital parts of aeroplanes.

Now, not only do the timbers of different kinds of trees differ in their qualities, but the timber of one and the same species of tree varies according to the conditions under which it is grown. Therefore, if timber of the best quality is to be produced it is necessary to be able quantitatively to estimate the mechanical values of different samples, and to analyse the conditions under which these have grown, so that in forestry operations the correct treatment may be adopted in connection with each species of tree. Some of the valuable results obtained in this connection by the researches of botanists, foresters, and mechanical engineers, may now be considered.

Timber is not strictly a material, but is an elaborately designed structure, consisting of solid wood-substance excavated so as to form a framework. The elementary structural units of wood are hollow: their solid walls and sometimes their cavities contain water; the portions of their cavities unoccupied by water are mainly filled with air. When a piece of wood is completely dried its weight may be regarded as wholly due to the solid framework of wood-substance (though this is not absolutely correct). Inasmuch as the specific gravity of the wood-substance of all kinds of timbers investigated is approximately the same (viz., about 1.55 or 1.56), it follows that the so-called specific gravity, or the weight per cubic foot, of absolutely dry timber is a sufficiently correct indication of the amount of wood-substance in it. A "heavy" timber has much wood-substance, a light timber has only little wood-substance. Hence it follows that the strength, stiffness, hardness, and heating power of timbers tend to be proportional to their respective specific gravities, so long as they contain the same percentages of water. This tendency is at a maximum when different samples of one and the same kind of timber are in question.

In the case of the most important of all coniferous timbers, the Scots pine, the specific gravity and compressive strength of the heaviest wood are more than three times those of the lightest wood. If comparison be made of the timber of this tree grown on similar soils and with similar treatment, but in different climates, changes in structure of the wood are revealed to the naked eye. As the climate becomes colder growth is slower and the annual growth-rings of the wood are narrower, but this diminution of the thickness of the rings takes place more at the expense of the soft light spring-wood than of the heavier harder red summer-(autumn-) wood. Hence the narrow-ringed wood is heavier and stronger. When, however, the climate becomes too severe—as in regions nearing the Arctic zone—the attenuation of the growth-rings continues, but the wood is lighter in weight and weaker; such is the red deal exported from the White Sea. A knowledge of these facts rendered possible during the present war the correct anticipation of the occurrence in the Highlands of Scotland of slow-grown, light Scots pine, eminently suited for use in aeroplanes. Variations in the soil and in the light to which Scots pine is exposed cause corresponding changes in the structure and properties of the wood. One example of the comparative effects of knowledge and ignorance in these matters may be cited in reference to the present war. Germany having made thousands of mechanical tests and observations on the structure of Scots pine growing in various forests of that country, was able instantly to secure rich supplies of this wood of exactly the quality required for aeroplanes. In this country, until the present war began, we did not know the mechanical values of any kind of timber whatsoever growing in the United Kingdom, still less did we know the values for the different varieties of one timber, nor where these varieties were to be found: we were compelled to find and then test the woods that might be suitable. By way of contrast to the softwoods discussed, hardwoods of the type of the oak and ash may be considered. In these, as the growth is more rapid, the increased width of the annual rings is often mainly caused by disproportionate additions to the hard, heavy, fibrous, summer-wood produced outside the soft, weak, porous spring-wood. In the case of the oak there is probably a limit to this tendency, as towards the South of Europe oak timber, though wide-ringed, is slightly softer than that grown in our own climate. The weakness of narrow-ringed porous ash timber is familiar to all practical men, especially in connection with those trees that have grown slowly under the influence of excessive shade.

In timbers of this type there is a decline in weight and strength when the annual rings are of the same thickness, but there is a wider zone of porous wood (due to a larger number of series of pores). Monsieur Thil found, for instance, in oak, where each annual ring was half a centimetre in thickness, that the tensile strengths of three samples, showing respectively 1, 2 to 3, and 3 to 4 series of pores in the spring zone, were 17.1, 13.6, and 12.7 kilograms per square millimetre.

ARCHÆOLOGISTS IN BRISTOL.

THE annual meeting of the Bristol and Gloucestershire Archæological Society was held on Saturday afternoon at the Council House under the presidency of Dr. E. S. Hartland, F.S.A. Amendments to the rules submitted at a special meeting on January 28 having been adopted

Mr. Roland Austin (secretary) read the report for the past year. It recorded that it was the fourth time the annual general meeting had been held in the midst of the great European war, and while the Council recognised that much of the activity of the society had to remain in abeyance they trusted, for the sake of its past record and in the firm hope as to the ultimate issue of the conflict which was raging, that members would continue their support, so that when the sword was laid aside the objects for which the society had striven during the past 40 and more years might once again be followed with renewed zest. The number of members and subscribing libraries was now 465, an increase of two compared with July, 1917.

The Chairman briefly moved the adoption of the report, expressing the society's gratitude to Mr. Austin for the enormous amount of work he had done.

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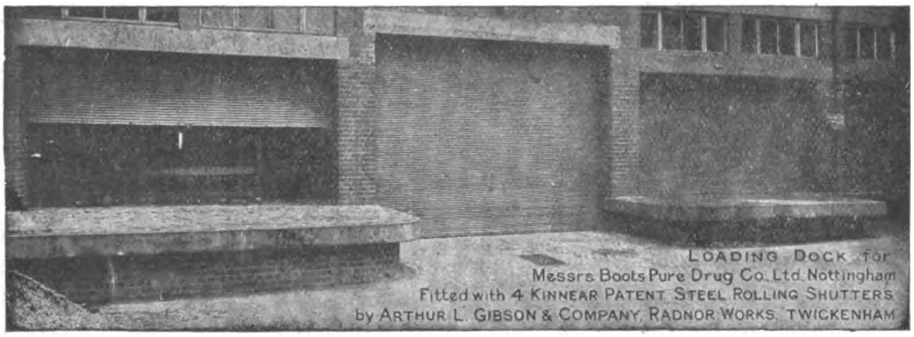
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Mr. F. A. Hyett seconded, and the motion was carried.

The following officers and members of the Council for the coming year were elected:—President, Mr. J. E. Pritchard, F.S.A.; chairman of Council, Mr. F. A. Hyett; vice-chairman of Council, Mr. J. E. Pritchard, F.S.A.; members of Council, Messrs. James Baker, G. S. Blakeway, Rev. W. E. Blathwayt, C. E. Boucher, T. S. Ellis, E. S. Hartland, F.S.A., Wilfrid Leighton, J. J. Simpson, and Charles Wells; editor, Mr. E. Sidney Hartland, F.S.A.; treasurer, Mr. F. Hannam-Clark; secretary for Bristol, Mr. L. J. U. Way, F.S.A.; general secretary, Mr. Roland Austin; local secretaries: Cheltenham, Lieut.-Col. J. C. Duke: Cirencester, Mr. E. C. Sewell; Fairford, Rev. W. C. Emeris; Lydney, Mr. F. S. Hockaday; Newent, Mr. E. Conder, F.S.A.; Northern division, Mr. E. A. B. Barnard. F.S.A.; Stroud Mr. R. H. Penley; Tewkesbury, Mr. F. W. Godfrey; Berkeley, Rev. W. F. D. Curtoys; and Wotton-under-Edge, Mr. Vincent R. Perkins.

Mr. Pritchard was then installed president, Dr. Hartland remarking that they could not have made a wiser choice. Mr. Pritchard returned thanks for the honour conferred upon him, stating that having regard to the honourable roll of his predecessors it was with great diffidence that he accepted the position.

Mr. F. A. Hyett expressed the society's thanks to Dr. Hartland, the retiring president, stating that in one branch of archæology he was second to none in the whole country.

Mr. W. St. Clair Baddeley seconded, and the motion was heartily carried.

TREATMENT OF SEWAGE.

A MEETING of the Association of Managers of Sewage Disposal Works was held at the Town Hall, West Bromwich, when the members were received by the Mayor (Councillor Dr. T. Sansome).

After thanking the association for electing him to the presidential chair, Mr. J. Edward Willcox, M.Inst.C.E., pointed out in his address that owing to war restrictions little constructional work had been carried out in connection with sewage disposal works, except for camps and munition works.

He described the effect of these war restrictions on the question of sewage treatment, and gave details of the progress which had been made recently both in this country and in America, as well as the methods which had been adopted for the training camps of the English and American Armies, and the advantage and economy which would be effected by standardisation.

One lesson of the war, he said, was the necessity of increasing our home production of food and the need of utilising sewage and sewage sludge as a fertiliser, and he indicated the means by which this could be accomplished, and the fundamental importance and value of nitrogenous fertilisers.

Mr. Willcox then mentioned the principles involved in the correct design of purification works, and the matters on which there was still much scope for research and investigation.

Reference was made to recent experiments in connection with new forms of tanks and deep filters, and the work which had been done both in England and America with the activated sludge process, the speaker describing at some length this new system and the many practical problems relating to it as affecting design and cost.

After dealing with the effect which the establishment of new industries and large building developments would have on the question of sewage disposal, and the desirability of affording further facilities for trade wastes, he referred to the necessity for State testing stations, where sewage problems could be investigated by a competent and independent authority.

He concluded by pointing out the great importance of skilled management, having regard to the intensive methods of disposal which were now being adopted.

Papers were read by Mr. A. D. Greatorex (Borough Surveyor) on "West Bromwich Sewage Works," and Mr. A. V. Reynolds, of Stoke, on "The Treatment of Sewage on Land," and a discussion followed.

On the conclusion of the meeting the members were entertained to luncheon by the Mayor. Afterwards they visited the West Bromwich Sewage Farm and works, where tea was provided by Councillor J. Izon Chesshire (deputy-chairman of the Sewerage Committee). There was a large gathering.

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Pitzhanger Manor.

SIR,—I am much obliged for your notice of the Pitzhanger Manor booklet in your last issue. Your supposition as to the detail on page 16 is correct, the wording of the description below the block has been accidentally abbreviated. It should read "Detail of the ceiling of the room over the eating room." A fuller account of Sir John Soane will be shortly available in a handbook, an "Account of Sir John Soane"; only the present difficulties of the Press have suspended its publication.

Excuse my pointing out a slip. Soane was a pupil of G. Dance, Junr., R.A., the architect of Newgate, not of his father, G. Dance, who built the Mansion House. I do not think moreover that Soane had anything to do with Dover House, Whitehall. He was not long with Holland, and while there he was concerned with the much earlier work of Clermont House, about 1772. Soane remained on terms of close friendship with Dance, Junr., and Henry Holland, both of whom were extremely able architects, particularly the latter. Dance retired early and Holland died in 1806. On Soane's return from Italy, 1780, he stayed at first with Holland, and he gave him some assistance when consulted, but nothing so far as I know of the character suggested in your note.—Yours, &c.,

ARTHUR T. BOLTON,
July 23. Curator, Sir John Soane's Museum.

Income Tax Returns.

SIR,—May I draw your readers' attention to the extra care needed this year in completing the Income Tax return forms? Where applicable and where the total income does not exceed £800, it is necessary to claim relief in respect of:—(1) wife, (2) dependent relative, (3) children under sixteen, (4) life insurance premiums, (5) expenses. Where the total income lies between £800 and £1,000 relief should be claimed in respect of:—(1) children under sixteen above the number of two, (2) life insurance, (3) expenses.

In these days when remunerative positions in the industrial world are filled by ladies, it is also important to note that a separate assessment and abatement can be claimed in respect of a wife's earned income, where the total income does not exceed £500. This is a privilege seldom taken advantage of.—Yours, &c.,

WILFRED T. FRY.
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THE death is announced of Mr. W. H. Bond, who had since 1905 been headmaster of the Brighton School of Art. Mr. Bond was fifty-six years of age.

DUNDEE Works Committee have decided to refuse the request of their workmen for a further increase of 12½ per cent. on their wages, the Town Council having already granted reasonable increases on pre-war rates.

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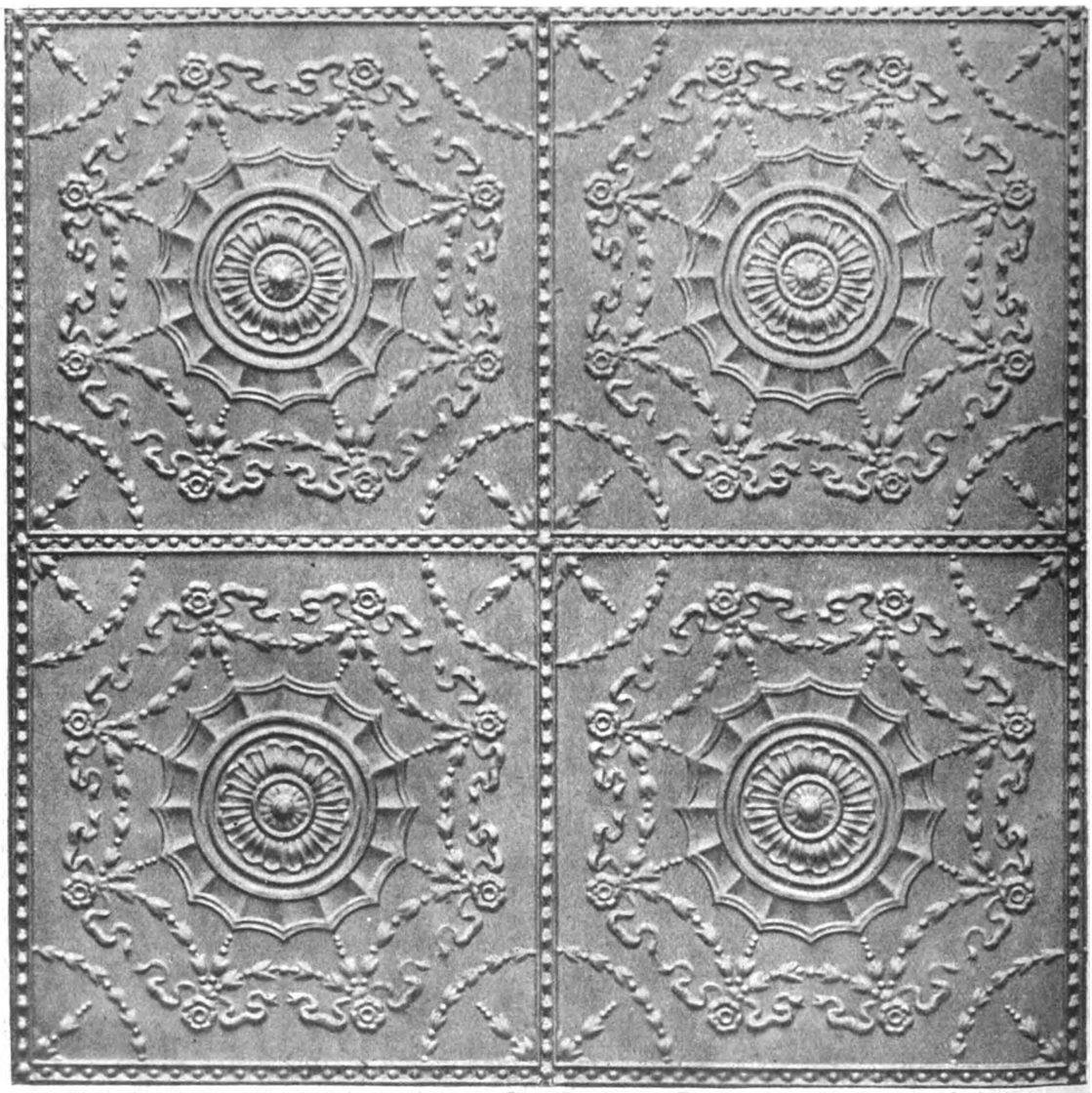
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FORTHCOMING EVENTS.

July 12 *to August* 10

Art Gallery, Rochdale. Exhibition of Government Housing Schemes and Town Planning Schemes in Bolton, York, Birmingham, Dublin, Rochdale, &c

August 12 *to September* 7.

British Scientific Products Exhibition at King's College, Strand, London, W.C.

WAR PRESSURE.

A Note on the Work of the Professional Classes War Relief Council.

By Paul Waterhouse.

We have all accepted, with resignation if not with enthusiasm, the doctrine that the war has got to be paid for. Some pay with their lives, some with their health, some by the abandonment of a career, others by the loss of friends, of sons, of husbands. Finally, nearly all of us pay in money.

Now it happens, by the accidents of civilisation (which is normally based on the equilibrium of peace, not upon the earthquake conditions of war), that the financial contribution is sometimes drawn with excessive severity from men and women who, though as willing as the rest of Britain to bear their burden, are the least well equipped for abnormal sacrifice. Nay, more. On these men and women the burden falls not only as a personal privation—which they would be glad enough and brave enough to bear—but as a much more terrible affliction. They see this loss of means affecting not their own comfort only, but the prospects of their children, the welfare of their invalids, the health of those they love, and the breakdown of all that we mean in the most sacred sense by the word "home."

It is to these sufferers and their needs that the Professional Classes War Relief Council has addressed itself and its energies. The delicacy of the Council's task will be at once apparent. These families, these homes, upon which the war has brought its stress to bear, are of a type in which the honesty and industry of the breadwinners has so continuously meant prosperity, or at least solvency, that poverty has for them come to imply, if not degradation, at least some indication of professional incapacity. It is, of course, unreasonable so to regard the mere absence of money; but human beings are at times unreasonable, and it is at least easy to understand that a man of middle age who has hitherto by his own exertions kept his family in prosperity finds it very difficult without wounding his self-esteem to become the recipient of unearned help from others. This is the class of man for whose assistance the Council exists. I am myself so unimportant a member of the Council that I can speak without a trace of immodesty of the excellent way in which it faces its difficult task, and of the means which it so successfully adopts for offering to those whom it wishes to help not alms, but the right hand of brotherly fellowship. A few examples which I will presently give will serve to show how this friendship has been administered in a way so free of any wound that it hurt the receiver no more than if the transaction had taken place within the confines of his own family. The Council is composed almost entirely of professional workers, men and women, selected by the executive bodies of the different branches of professional industry. It owes its initiation, its success, and its methods very largely to Major Leonard Darwin, its chairman. That honoured name, associated in our minds with the Descent of Man, is connected in the person of the chairman with the ascent of the race. Major Darwin's long studies in the theory of eugenics have been, since the war began, directed with unceasing energy to the problem of securing a successful and useful future to the rising generation. At all costs, so Major Darwin has pleaded, the children must not suffer. Their bodies and minds, essential assets in the capital account of England, must, as far as lies in our power, be protected from the disabilities that will assuredly befall them if healthy environment is curtailed or withdrawn.

This great task is no imaginary fancy of the theorists but a vital duty. The men who are fighting fight for England. And what is England? Not a mere island plot in the North Sea, not even an aggregation of those larger distant plots which we call the Dominions. No! the kingdom, the Empire of England for which lives are being shed and money poured out is an England of the future, an England which will fail to exist if it is not manned by a race of well-nurtured, well-trained, and well-taught men and women.

How far the War Relief Council is succeeding in this task of race-protection, and how far that protection is offered without offence to the receivers, and without that loss of dignity and independence which are necessary ingredients in the character of the race, can be gauged in some measure by the examples I am about to quote. I have chosen these cases exclusively from the architectural and kindred professions for two reasons—one reason, unhappily, is that architecture has been more hard hit by the war than many other occupations; the other is that I am anxious to make it clear to architect-subscribers that their offerings have not necessarily had to go outside the profession. As a matter of fact, we architects have had a very full share of the Council's distribution of benefits. Probably I am not overstating the case if I say that nearly £2,500 has been spent—or, shall I say, invested?—on education fees and maintenance among the families of architects and surveyors. About £1,000 of this was laid out in cases which are still being assisted, and the help has reached no less than sixty-three families. Altogether 109 children in this professional group have been given a helping hand. Twenty-one of these were at boarding schools; many of the others were day scholars, and among these latter a good deal of useful assistance was given in the way of maintenance grants, school uniform, and help towards school dinners and incidental expenses.

Here is a very typical case, in which an architect and his family needed (and secured) the helping hand. The applicant came before the Council with two special troubles. His house was too large for his reduced means, and his daughter, who had made a start on office work for which she was not physically fit needed special training for some other class of occupation. The Council met these needs at once. The house trouble was eased by the introduction of paying guests, and a place was

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found for the girl on a farm. In addition, we made a grant for school fees for one of her brothers at a boarding school, and procured him hospitality in his holidays. This help was followed up by assisting a younger sister to find employment; and in the meantime the father's practice, following the precedent of other practices, sank from little to nothing, and, as he deserved help, he got it. He was placed on subsidised work of national importance, and eventually found a post in unsubsidised work which enabled him once more to become self-supporting. That he was eventually able to make ends meet was largely due to the boy's successful and gratifying response to the help he had received, for, on leaving school, he got a post in a bank. Thus it was that by an expenditure of £127 on a deserving family four members of it were put in the way of becoming breadwinners.

A certain surveyor was one of our earliest applicants. We advised him to apply to his professional institution, and for a time nothing more was heard of him. But in course of time the financial burden was increased. He had to remove his boy from school, and came back to the Council about his difficulties. Arrangements were made with a local education authority for the boy's admission to a good secondary school and his school dinners were paid for. The Council's work did not end there—the circumstances of the family were thoroughly investigated. It was found that the father had been obliged to give up work through ill-health, and that though his wife had obtained work as a Government clerk, there was not income enough to go round. A maintenance grant was made by our Education Committee, and the father was introduced with successful results to a professional benevolent society of which he had previously been in ignorance.

Here is another story that comes from the Eastern Counties. A surveyor had four children; his professional work was largely diminished, and he came to us for educational assistance. We found the day-school fees for all of the children, and subsequently, on the advice of his professional society (which was making a weekly grant for the expenses of the home) our Council undertook to defray the cost of school dinners.

And this, again, is a fine record of a plucky struggle most deservedly helped with timely and welcome aid. An architect's widow before the war supported herself and her three boys by musical teaching and musical engagements. The war put an end to this, and the brave mother broke down. About the same time the eldest boy was killed in an accident. Then the second boy and his mother found work in offices, and we undertook the boarding-school fees of the youngest son. Still the financial strain continued, for the elder boy was only a small earner; and we helped the mother with some necessary "extras." A nomination was obtained to enter the junior boy at a public school, and he did his part by passing the competitive entrance examination. He could not, however, enter the school without undergoing a slight operation. Our Committee were happily able to arrange for his admission at one of the London hospitals and secured hospitality for him during convalescence. He is now, it seems, freed from anxiety about the remainder of his school career, and the whole little family have been helped over their wartime difficulties.

I could easily multiply these cases. There are some in which it is the breadwinner himself who needs help. One architect, forsaken by architecture, wished very wisely to take up munition work; the Council got him trained in tool-setting and he obtained a good post. Another architect was set, as a subsidised occupation, to make measured drawings of an ancient priory fast falling into ruin. His work was of archæological value.

It would be difficult to catalogue here every class of assistance given, for every case, if deserving, is treated on its own merits, and the remedies are as various as the forms of distress. Very often a gift of clothing has been the one thing needed and the one thing obtained.

But I must not end without some allusion to the maternity home. The generosity of Mr. Pierpont Morgan in lending his large house in Prince's Gate for the work of the Council provided sufficient house-room not for the offices of the Council only, but also for this exceptionally well-appointed and well-staffed establishment. Its success as a relief to the anxieties of innumerable families has been incalculable; and it would be difficult to acknowledge worthily the thanks which are due to the honorary physicians.

It is worth while to mention that, so far from the work of the Council overlapping the work of the Prince of Wales' Fund, it co-operates with it. The fund makes grants to our Council in direct proportion to our own outlay, and the Council is one of the accredited means by which alone the moneys of the Prince's Fund can find their way to the men and women of our own class.

I hope I have said enough to show how intimately this Professional Classes War Relief Council is identified with the needs and the relief of architects and kindred professional men. I have only three things to add in conclusion. If you want more information about the Council go and ask for it; your inquiries will be welcomed. If you want brotherly help or counsel go and ask for that; you will probably get it in the pleasantest of forms. If you want to subscribe, think the matter over first, then double the amount you first thought of sending and despatch it to 13 Prince's Gate, S.W.

THE HOUSING ENTHUSIAST.

Between columns of news relating to the great war those who read the daily papers cannot fail to notice more and more frequent references to the housing question, and closer examination will discover that meeting after meeting is being held all over the country by associations connected with town planning, and particularly by the National Housing and Town Planning Council. This active body, led by its indefatigable secretary, Mr. Aldridge, has lost no opportunity of pressing its views on Government Departments, interviewing Cabinet Ministers, calling conferences, and generally emulating the activities of a political party. The average politician has swallowed the bait so constantly dangled in front of him, and should the composition of our next elected Parliament resemble that of its predecessor, the country would stand committed to an immense programme of housing, in the execution of which the finances of the State would be deeply pledged and which would, moreover, extinguish the whole system of voluntary effort, which, as statistics prove, has sufficed to provide something like 97 per cent. of the whole of the housing carried out in the country up to the date when the disastrous Finance Act of 1909 became law. Every imaginable innuendo and misstatement has been made, indulged in by fervid speakers, to buttress up the argument that in the future the Government, acting through local bodies, must carry out a large programme of housing, the burden of which is to be borne by the taxpayer either in the form of rates or of Imperial taxation. We are reminded how badly the speculative builder has built, how inartistic are his works, and how great has been his greed. But we are not told that he has had in every case to conform to by-laws and lines of frontage fixed by the authorities, and that if his work has been misdirected it is within the power of any authority to adopt the Housing and Town Planning Act, under the provisions of which the number of houses to be built on a given area is strictly limited, the lay-out of new roads is controlled, and, in a word, all that is done must be done in accordance with a definite plan laid down, whether the individual buildings are erected by a municipality or a private owner or syndicate. Neither is it fair to judge by what has been erected by private speculators in the past, for had municipalities carried out extensive building operations in former days, they too would have conformed to the standards of the times, and been condemned when judged by the new requirements of to-day.

Those who understand finance and building know that the speculative builder has usually operated on the

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smallest margin of profit—in a word, he has usually done his building at cost price and made a very uncertain profit out of the increased ground rents his enterprise has created, and the provisions of the Finance Act, by mulcting him of a portion of those profits without compensation for the losses which often occur, has destroyed security, rendered it difficult or impossible to secure mortgages, and so created a shortage in housing which, added to the stoppage of building during the war, has been so much fuel to the energy of the advocates of municipal housing.

The Finance Act, which was to produce revenue, has been an unmitigated failure, and its administration has instead cost the country large sums annually; but the clear case made for its repeal is shelved—firstly, because those who are responsible for an ill-judged measure are not anxious to admit their mistake, and, secondly, because it is easy for fanatics who wish to press forward socialistic autocracy to do so if they can point to private enterprise as having failed, though such failure may be compared to that of a train which cannot reach its destination because the rails have been torn up.

We know that there have been other contributory causes, and among them the increased price of building, but, more than this, our inequitable system of valuing land and buildings, which penalises the improver. Mr. E. M. Gibbs, of Sheffield, has made out an excellent case for the abolition of our present system of rating in favour of what he calls a local income rate, in which everyone will be assessed, not on the value of his premises, but on the income which he makes locally. At present the man who improves his property is at once penalised by an addition to the burdening rates, while those who do nothing, though they may have larger incomes, escape much of the incidence of taxation. Were the laws of rating reformed, an enormous stimulus would be given to the building industry, to the gain of the whole community, and the provision of housing would become an easier proposition.

What the country and the building trade really wants is the removal of unwise laws which check production and not the creation of an inflated bureaucracy. We do not wish to add, if it can be avoided, to the Pelion of war indebtedness the Ossa of huge peace expenses involved by systems of State Socialism.

Again, though we are furnished with masses of so-called statistics as to the need for housing, we shall, if we are wise, narrowly investigate the figures given to us. The housing which will be required in the future depends on many factors which are at present unknown quantities. We cannot tell what amount of emigration will take place at the end of the war, nor can we yet judge of that cardinal factor, the new commercial conditions, which will affect many industries. Shall we have free trade, as before, or protection for our industries, for such points will affect the whole future of many of them? We venture to state that, even if there is overcrowding in certain districts after the war, it may be better to deal with such overcrowding gradually than to risk overbuilding, as we may do if we act too hastily.

Then, again, it is assumed that municipalities must build, because, owing to the increased cost of building, it will be impossible to build at economic rates, and therefore the State or municipality must build and bear the loss. And we ask why this should be? If the price of food goes up wages rise, and why should not rents rise also, for housing is as essential as food? To build and let at uneconomic rents is no advantage to the worker, since his wages will bear a certain ratio to his necessary expenses, but will simply be a bonus to his employer—probably the last thing which Labour as a whole wishes for. So, step by step, we are led to the inevitable conclusion that the whole structure of State-aided housing, so widely and insistently advocated, is unnecessary, and merely a pawn in the political game.

In saying this we are not stating that no housing will be required after the war, but that there is no reason why the bulk of it should not be provided by means of the same agencies which have previously sufficed. Nor is there any reason, if this is done, why the quality and disposition of housing should suffer. Public bodies adopting the Housing and Town Planning Act can set up any required standard, and the architect's services will be called into requisition by the speculator in building if the standard set is a sufficiently high one. But there is no reason why the State should put the taxpayers to an unnecessary expense, and no reason why we should not hold our hand a little while to see what, where, and when housing is required, for, in truth, in spite of the statistics showered upon us, we do not think we as yet have certain knowledge. It is surely wisdom to encourage a class of men who have not perhaps altogether wisely or too well done a public service in the past, and not treat them as criminals and help to create unemployment. We shall need freedom and individual energy in the new England, as in that of the past.

NOTES AND COMMENTS.

The British Science Guild have arranged to hold an exhibition, opening on Monday, August 12, at King's College, to show the advancement which has been made by the co-operation of science and industry during the war. The war has caused many alterations, but perhaps in no field of enterprise has there been such marked change as in scientific and industrial research, and the outlook for the future in consequence is very promising.

The report published in this issue on the question of Reconstruction in Germany shows that the enemy is making arrangements for the after-war competition, and in a further report issued we have the information as to the preparation being made to deal with the housing problem, which from a perusal we find is just as acute in Germany as in this country. It is stated that in the last fifty years Germany has changed from being a preponderantly country-dwelling people into a nation of town-dwellers. Even before the war the housing question was becoming acute. The increase in population demanded a regular yearly supply of 200,000 dwelling-houses, 75 per cent. of which were small houses; but since the war building activity has been at a standstill. During the war many families are sharing houses, but they will wish to go into houses of their own when peace is signed; there will also be frequent moves from large to small houses. Rents must inevitably rise, and the families with many children will suffer most. All that has been done so far towards remedying the existing evils is as a drop in the ocean, and a comprehensive system of Imperial housing reform is required.

In various parts of Germany there has been great activity to deal with the problem, and various Federal States and towns are already contemplating many kinds of improvements. Among these States Saxony, Meiningen, and Anhalt may be mentioned. From June 1, 1918, the entire supervision of dwellings in Saxony is to be placed under a Government inspector, who, as also in Bavaria, will be directly answerable to the Ministry of the Interior. On January 9 of this year the Landtag in Meiningen unanimously passed a Bill for the Government control of dwellings. In the Duchy of Anhalt a law to promote the erection of small dwellings was passed on September 5, 1917. This law authorises the Government to participate financially in building associations for the public welfare, and places at its disposal for this purpose Mk. 300,000 from the surplus of the Landrentenbank, if required. Moreover, it enables the Government to give guarantees for second redemption mortgages up to a limit of 90 per cent. of the cost of construction, and up to a total amount of Mk. 2,000,000.

It does seem that in Germany every effort is being made to re-establish the building trade and that the

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Government there is determined to assist the industry in every way possible. We should like to see some sign of encouragement in this country, and the first and foremost claim is for an alteration in the amount permitted to be spent on building operations, and a removal of all restrictions which can be removed. From the report on Trade Reconstruction in Germany, Imperial and State Housing Proposals, we take the following paragraph:—Since it appears impossible to start building operations on the basis of the efforts of private individuals alone, owing to the increase in the cost of building materials and to the multifarious urgent claims which will be made upon capital during the transition period 500,000,000 marks are to be provided from the Imperial Exchequer for the purpose of making building grants and loans on reasonable terms, as well as for forming a guarantee fund. At the same time, the Federal States and Communes must be induced to participate in the new building operations by providing from their resources a sum at least equal to that provided by the Imperial Exchequer.

The insurance offices, including the sick pay offices, the provincial insurance companies, the Imperial Insurance Office for Employees, and the co-operative trade societies, as well as the public savings banks, are to invest all available sums as far as possible in loans on small buildings at a moderate rate of interest. In consideration of the shortage of building materials of all kinds, it is urgently necessary to set the building materials industry going again by the timely discharge of labourers from the army and by making adequate supplies of coal available. The building materials set free by the army administration are to be given at reasonable prices to those Communes where a shortage of houses exists.

The trustees of the British Museum have decided to reopen several of the galleries. The most valuable objects have been removed for safety, but much of interest is available, and an exhibition has accordingly been arranged consisting principally of casts and facsimiles, coins, medals, &c., which it is hoped will be instructive in itself and representative of some part of the treasures of the British Museum. If the experiment is successful it may be possible at a later date to extend the exhibition by the opening of some of the other galleries. The opening time will be from 10 A.M. to 1 P.M. and from 2 P.M. to 5 P.M.

Bristol is determined to be ready for after the war. With an ambitious housing scheme and a big dock extension the city is waking up from the sleepiness with which it has suffered for so many years. The Corporation Bill, which has just passed, is for the extension of the Royal Edward Dock at Avonmouth and a deviation of one of the railways serving the dock. The estimated cost of the work is £1,325,000. The Bill came before the Local Legislation Committee of the House of Commons last week, and passed through without opposition.

In all the schemes which are brought forward for the erection of housing for the working classes the main idea seems to be the provision of a garden. It is no libel on the working man to state that where one man will value such provision many more are non-committal on that subject. What is wanted is "dry, clean, and well-lighted houses, with dresser and cupboard accommodation, a tiled washhouse which can easily be kept clean, and a small garden which may be kept for the children to play in, or can be laid out as a garden, in the limited time at the disposal of the tenant." This is what we believe would be most popular, particularly if it was possible to have a side entrance, so that the children would not have to enter by the front door after the place had been cleaned up, as one correspondent puts it, and added, a good shed in the garden, of course. Our correspondent was rightly annoyed at the suggestion so often made that the British working man did not desire a bath in the house. The idea of a side or back entrance seemed to be a very strong point with him, a working man, with, as he termed it, "a missis and five children, a working man, and a son of parents who had been *working* people all their lives."

Birmingham City Council has under consideration an important scheme for the construction of a large permanent generating station at Nechells, which will involve the expenditure of upwards of a million and a half of money. The Electric Committee report that a scheme was sanctioned by the Council in 1913 for the erection of a new generating station with a capacity of 100,000 k.w. Work was in progress when the war broke out, but as it could not be finished in time to meet the urgent needs of the city a temporary station was sanctioned in 1915. This was not sufficient, and additional plant since provided has also been found inadequate. After considerable negotiations with the Ministry of Munitions sanction has been given for a resumption of work in connection with the Nechells scheme.

Australia House, Strand, is to be opened by His Majesty the King to-morrow, and our next issue will be specially devoted to illustration and description of this building, and will be given on such a scale that an increased demand for that issue is assured. May we remind our friends that if they desire a copy they must order it? To obtain your copy of "The Architect" all that is required is to instruct your newsagent to supply you with it weekly until further notice, or write to the publisher to that effect.

A number of members of the Royal English Arboricultural Society recently visited Crewe Hall, Crewe, and inspected the woodlands. Lord Crewe, presiding at a meeting, said they were now beginning to see what for many years had been known to be going on—that the timber supplies of the whole world were becoming short. When he was Colonial Secretary many discussions took place as to the future of timber and the timber supplies all over the world. In the great timber-growing countries there had been for generations an almost absolutely reckless destruction. Hundreds of millions of pounds' worth of timber were destroyed either by burning or felling in the process of clearing new parts, and there would need to be a great reproductive system. He was in hopes for some time of a timber supply from Africa, but he was not sure that these hopes were likely to be realised on a very large scale, and therefore it became the duty of all European nations, in reconstructing their social and economic systems, to consider what could be done in the way of increasing their timber supplies. It was not only a great national but a great international question.

An exhibition has been opened by the Lord Mayor of Leeds and is being held at the Leeds City Art Gallery of drawings and maps of Greater London, South-East Lancashire, and the West Riding of Yorkshire. The "Yorkshire Post," describing the exhibition, states that the value of such a scheme will be evident to any one who takes the trouble to examine the beautifully executed coloured maps in the exhibition. Those of the Greater London survey are the most comprehensive, dealing as they do, not only with physical characteristics of the area, but health statistics, density and growth of population, open spaces, traffic facilities, housing, meteorology, recreative provision, sanatoria, and other matters of interest to the community at large. Every subject has its chart, so that instead of wading through columns of puzzling statistics, one sees at a glance, by the various colours representing the conditions under notice, to what extent and in what way the area is affected. In South-East Lancashire a special feature has been made of main road traffic, as a guide to engineers in making developments and improvements; while the survey in the West Riding is at present concerned mostly with physical characteristics, housing and traffic facilities, thereby affording a basis for town-planning schemes.

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The principle adopted is that of the contour map of the atlas. What the architects have done has been to take the Ordnance Survey map, and, after carefully visiting and examining a particular district, to classify different portions in colour. Thus, pasture land is represented in light green, cultivated land in yellow, moorland in light purple, dwelling-houses in dark chocolate colour, factories in red, railways in dark purple, and so forth. A key to the coloured portions is given at the side of each map, and every tint has its corresponding number as a further clue. Useful statistics of all kinds relating to civic life have their particular colour and number, and in this way—as the London maps show—it is possible to present a variety of conditions in the form of a picture that speaks with far more force than a mere tabulated statement. The operations conducted from Leeds as a centre cover the area lying between Wakefield and the River Wharfe on the one hand, and between Garforth and Burley-in-Wharfedale on the other; and as the series of maps include separate charts of the city wards and outlying townships, they constitute at once an object lesson and a guide to town planning.

A writer in the "Sheffield Telegraph" commenting on the Coventry strike, states:—

"A good deal of nonsense is being talked and written regarding the strike of engineers, and all sorts of attempts are being made to obscure the issue and dope the public. There is really only one issue and that is simplicity itself. A section of the engineers, believing themselves to be all-powerful, are deliberately challenging, not the employers, not the Government, but the nation. They claim the right to over-ride Parliament and to dictate policy. But that, someone will exclaim, is civil war! Exactly—and it is a state of things that Pacifists and Syndicalists have been aiming to bring about almost ever since the war started. Their objects are not the same. They are in alliance for different ends. The Pacifists seek a German victory; the Syndicalists want to precipitate a revolution.

"Isn't it significant that the conspiracy has been consummated almost simultaneously with Germany's recent defeats? Many of the men out on strike do not realise this. They have allowed themselves to be gulled by the foolish talk about the 'embargo.' They may be honest, they may even, in a queer, twisted fashion, be patriotic, but they are certainly stupid. Behind this strike are sinister, secret forces striving to paralyse the Allies at the moment when they have the Germans on the run.

"We hope the Government will adhere to their announcement and send into the Army the men who will not work. The authorities have manifested deplorable weakness in many directions. This is a time for firmness. The men on strike have declared war on the nation and on the boys at the front. To those of us who are enduring the agonised anxiety arising from the knowledge that any moment may bring the dread news of bereavement and death they are adding a new fear that our boys may be left short of the wherewithal to fight. And the nation thus challenged and betrayed looks to the Government to see that the men who will not work should have a taste of the Hell of the fighting line in which the men they would desert are standing with such heroic valour."

ARCHITECTS' BENEVOLENT SOCIETY.

At a recent meeting of the Council of the Architects' Benevolent Society, Sir Charles A. Nicholson, Bart., M.A., was elected hon. secretary in the place of the late Mr. Percivall Currey.

ILLUSTRATIONS.

NORTHWICH POST OFFICE.

VIEW IN ALGIERS.

"ANDERMATT," AMERSHAM ON THE HILL.

OTTAWA GOVERNMENT BUILDINGS.

SOME BELGIAN TOWN HALLS.—I.

By John A. Randolph.

The town halls of Belgium may be scheduled into three divisions—the well-known ones, such as Bruges, Ghent, Brussels, Antwerp, Audenaerde, Louvain, Ypres—those we have illustrated already; Lierre, Nieuport, Hal, Thuin, Binche, Alost, St. Trond, Ménin, Hérenthals, and (in the west front view of the church), Moll; and the less well known, some of them not architecturally remarkable enough to illustrate. It is the more noteworthy ones of this last category we propose briefly to touch upon.

First and foremost among them we place Termonde as it was in the 'eighties, and before the mischievous alteration we have alluded to in the "Call of Belgium," and which we illustrate as a violent contrast with the singularly attractive building as we first knew it. The feebleness of the modern work is deplorable, both as to outline and detail. It was designed to balance with and closely match the mid-nineteenth century work on the other side of the tower, and by its aggressively modern treatment and glaring-white newness, and,



TERMONDE, BEFORE THE ALTERATION.

owing to the difference of the stone employed to that of the light sepia-toned tower (as was also the vanished old work), it grievously offends the eye and all canons of good taste and of sympathetic treatment of the subject. It is an uncalled-for *renovation*, not a *restoration*, of which one cannot speak with patience, and those responsible in any way for the wanton outrage on such a refined gem of the past cannot even claim ignorance as an attenuating circumstance. As the older modern work must have replaced, several years before the 'eighties, some valuable old work, it would have been only right to have reproduced the old, instead of perpetrating the modern monstrosity and archæological crime and of removing all traces of history, save the tower, through which the building passed in and since the Middle Ages.

Not only was the gable towards the tiny Grand' Place sacrificed, but also a very similar and wider one "round the corner"—the end gable to the roof—rather bolder and more varied, and, of course, higher. It is a pity the photographer, at the time he took the old view we reproduce, did not take up his position so as to ensure

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a pictorial record of both those gables. He did not even make a separate photograph of it, possibly owing to the view being, as the French say, "à contre jour," or against the sunlight.

Of Loo, near Furnes, the record shows a curious projecting turret on the façade, with tiny stepped gables at its four sides. Most of this has been shattered by German shells, and the simple but attractive building has also suffered much.

That of Furnes might almost be classed among the well-known ones now, owing to the many views published in the illustrated Press into which it enters; but it lay off the beaten track of tourists, and consequently was not of the same category as Bruges, Ghent, and so forth. It stands in a corner of the Grand' Place, near the Belfry and St. Walburga's Church, and dates from 1596 to 1612, from the designs of Liévin Lukas.



TERMONDE, AFTER THE ALTERATION.

The quaint little town hall that once stood at Ninove, and to which we referred a few weeks ago, is here depicted from an old print. The present building, slightly altered since 1845, is classical in style, and passable.

BRITISH ARCHÆOLOGICAL ASSOCIATION.

SEVENTY-FIFTH ANNUAL CONGRESS.

The British Archæological Association, which may be said to be entitled to call itself venerable, held its annual congress in London on July 18 and the two succeeding days. Founded in 1843 as an off-shoot of the Society of Antiquaries, "for the encouragement and prosecution of researches into the arts and monuments of the Early and Middle Ages," it has preserved the continuity of its annual gatherings ever since that remote date, and, in spite of travelling restrictions and the engrossing anxieties of the present time, it was felt by the Council that it would be a pity to break that continuity and to abandon the Congress. It was decided, however, to restrict its duration to three days and to hold it in London, as being the most convenient and accessible centre. Towns and cities far afield were considered impossible. Colchester was suggested, but the lack of accommodation presented difficulties, and very wisely it was decided to meet in London, where there is so much to explore of historical and antiquarian interest. Even those who have lived in the Metropolis all their lives and profess to know it well discovered that there were parts which they had never explored before, and the expert guidance of Mr. Philip M. Johnston, F.S.A., and Dr. Martin, F.S.A., revealed treasures of which they were ignorant.

The Congress was held under the presidency of Mr. Charles E. Keyser, M.A., F.S.A., J.P., D.L. who has for many years been the active President of the Association. The Director was Mr. Philip Mainwaring Johnston, who proved himself to be an expert leader, and whose descriptions of the various places visited were always clear, learned, and admirable in every way. The Secretary was Mr. W. A. Cater, F.S.A., and the Treasurer Mr. Bagster, F.S.A., who has done much for the Association, acting as Secretary as well as Treasurer during the absence of Mr. Frank Lambert on military service at the Front. About sixty members and their friends attended the Congress, including the Rev. P. H. Ditchfield, F.S.A., Editor of the Journal of the Association, Colonel and Mrs. Keyser, Mr. and Mrs. Francis Weston, Rev. P. Lach-Szyrma, Mr. W. Derham, Mr. and Mrs. H. C. de Lafontaine, Mr. A. W. Oke, F.S.A., Mr. W. Dale, F.S.A., Dr. and Mrs. Cato Worsfold, Mr. Holden, Miss Walter, Mr. and Mrs. Soltau, Colonel and Mrs. Wodehouse (Canada), Professor Carleton Williams, &c.

Westminster Abbey.

The proceedings of the Congress commenced with a visit to the little-explored parts of Westminster Abbey, to which august building the eyes of discerning architects are turned at the present time when the ideals and plans for a great war memorial are exercising many minds. It is felt that these should concentrate around the old spiritual home of our race,

> Twelve hundred years and more
> Along this holy floor
> Pageants have pass'd, and tombs of mighty kings
> Efface the humbler graves of Sebert's line,
> And, as the years speed, the minster-aisles divine
> Grow used to the approach of Glory's wings."

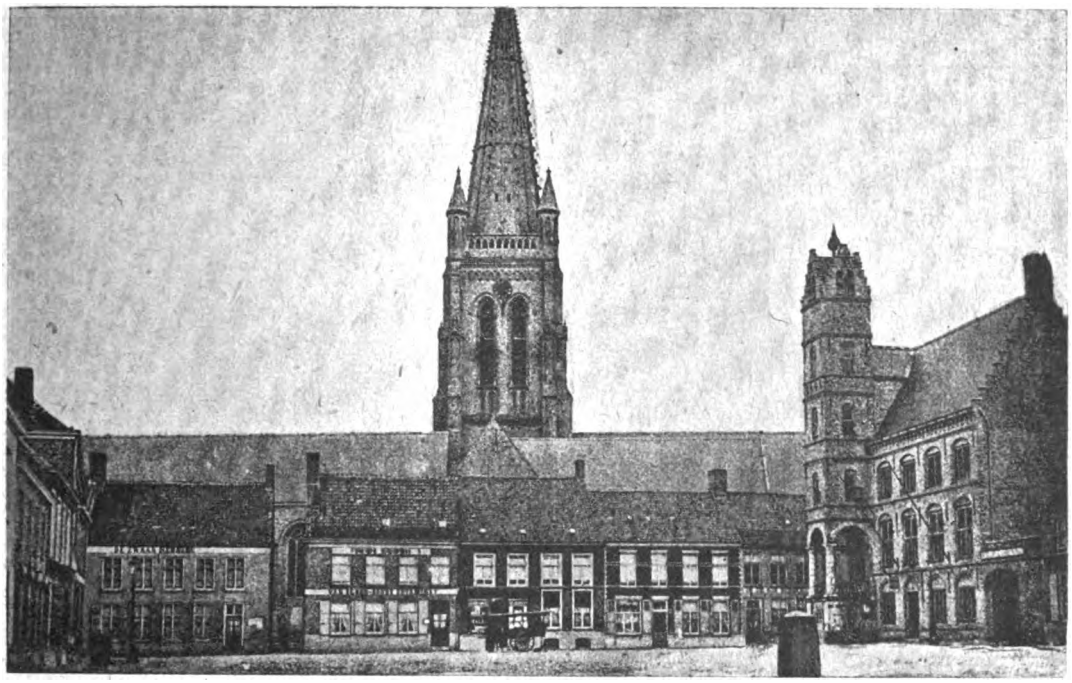
As Mr. Wilfred Whitten has written so well: "Our off-sprung races have grown used to that vision; it is in the Abbey that they wish to see their own great names written, and the memories of their sacrifices pass into the dust and blood of the race. They will not, I think, ask for a 'Valhalla' of the war, or for anything in the nature of a mausoleum. Such a building, devoted to tombs and flags, and isolated elsewhere than at Westminster, has been proposed, and I can imagine nothing more chill or more alien to the nation's real feeling. Our whole inner purpose is to recover the noble proportions of life as they have been symbolised for centuries in Westminster Abbey. And our overseas peoples will tell us that we can give the dust of their heroes and the records of their soldiers no honour comparable to their reception into the great parish church of the Empire in which all 'diversities of gifts' and all differences of administrations have found their rest and memorial. The maternal grace of the Abbey was never so felt as to-day." He goes on to speak of the need of the enlargement of the Abbey on the ground south of it which can be cleared, and thinks that the new building should be a place of worship with not only the fretted vault, but the pealing anthem to swell the note of praise. Such is the great vision.

The members of the Association had been invited to explore the comparatively unknown recesses of the sacred fane, and assembled at the entrance archway to Westminster School-yard, whence they wended their way to

Westminster School Hall.

Here they were welcomed by the Headmaster, the Rev. Dr. James Gow, who gave an address on the history of the school and its buildings. This school hall, he said, was the dormitory of the monastery. It was not connected with the cloisters, and was situate over the vaulting of Edward the Confessor's earlier building. Hence there was a strong echo in the hall, and if orators shouted they could not be heard very distinctly. There were traces of

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LOO, NEAR FURNES.

many periods. On the south there was a Norman arch of stonework, part of the Confessor's building; at the dais end there was an Early English window and two others at the other end.

It was almost impossible to reconstruct the monastic buildings in their entirety, because Protector Somerset, in the time of the Reformation, pulled down a great mass of the stonework in order to erect his house in the Strand that preceded the present Somerset House. A hundred years ago the school buildings were much dilapidated. Until the year 1869 Westminster School was under the control of the Dean and Chapter, and they managed it as cheaply as possible. The headmaster and the undermaster received indifferent salaries, while the Dean and Canons had goodly incomes from the foundation. They spent little money on the school buildings and patched them up when they were decayed.

The school was founded by Henry VIII., or, rather, refounded. The researches of Mr. Leach have shown that there was always a school here. There was an almonry or choristers' school, the accounts of which date back to a roll of 1355, which contains such items as "for the expenses of 2 boys, 2s.." and "for clothing the boys in the Almonry, 30s." In 1380 the master is for the first time called a grammar master, when there were twenty-eight boys. In the cloisters there are stone seats in which there are holes where the boys played at marbles. Mr. Leach seems to have proved that there was a Benedictine school for novices, and also a grammar school which was situate somewhere near the site of the present Army and Navy Stores.

Henry VIII. established the new school, which replaced the old grammar school and placed it in the Abbey kitchen. The foundation consisted of a headmaster, an under-master or usher, and forty King's scholars. The school was part of the College of Westminster. Queen Mary restored the monks, but Queen Elizabeth re-established the college and the school. New statutes were prepared, but these were never signed by the Queen. She brought the school into the present hall, the dormitory or dorter of the monastery. The school was here in 1560.

The hall is a fine and large chamber with a splendid hammer beam roof made of cedar wood. Some writers have stated that this wood came from the wrecked ships of the Spanish Armada; but this is conjectural. In one of the air raids some shrapnel fell through the roof at the lower end of the hall.

Dr. Gow pointed out the metal ties that spanned the hall, and alluded to the custom of the tossing of the pancakes. The origin of the custom had been lost in the mists of antiquity. When William Camden was undermaster or usher of the school, the room was divided by a curtain, and the boys used to throw cakes over it. But nothing certain can be said about the origin of this tossing of pancakes on Shrove Tuesday.

The masters were allowed to take private pupils, and William took in Ben Jonson, the great playwright; they received what fees they could get. Hundreds and hundreds of distinguished men had received their education in that room. At one end there was a partition or apse called the "shell," which was burned down in Dean Stanley's time, and he generously restored it. There is a picture of the school in 1840, showing the classes arranged in horse-shoe form around the hall.

The school preserves more relics of mediæval days than any other in this kingdom. At one time the boys did all the domestic work that in subsequent days was performed by servants. In Tudor times one of the King's scholars had a holiday once a week to stand outside the door of the headmaster, Dr. Busby, and meet all visitors who wished to see him; and to-day a boy still holds that office, being termed monitor ostii. There was also a monitor scholiæ, and a monitor stationis (playground). Before they had a bell at the school the boys were called together by voice, and even now, although they had a bell, the call "Gow's coming" could still be heard. Dr. Gow then referred to the famous Westminster Latin Play, the whole organisation being a relic of ancient times. He described also the punishment of birching which in that school was always inflicted on the back of the hand. Amongst the illustrious scholars were Ben Jonson, Herrick, Cowley, Dryden (an old form was carved with the name "J. Dryden"), Prior, John Lock, Cowper, Gibbon, Southey, J. F. Froude. All the great statesmen of the seventeenth century were educated here, because it was the chief school in London, and difficulties of transit prevented Londoners sending their sons to school at a distance. George III. made Eton more accessible by a good road, and it became the great Tory school, while Westminster remained the chief Whig school. Before the railways there were no distinguished scholars at Eton, Harrow, or Winchester; but in the sixteenth,

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seventeenth, and eighteenth centuries Westminster was the only great school. Merchant Taylors' School had some perhaps greater names in Elizabeth's time. St. Paul's School could boast of Milton, but not many persons of distinction; whereas Westminster in Busby's time had all the distinguished men of the age, whose arms were painted on the panelling around the room. After the war they proposed to erect a great memorial of all the heroes who have fallen, not only in this, but in preceding wars. Two hundred old boys had lost their lives in this war. Dr. Gow alluded also to the right of the boys of this school to attend the coronation of the sovereigns of England. This they did by prescriptive right. In theory the people elected and acclaimed the monarch, and James II., who was not very certain about his popularity, arranged that the Westminster boys should be present at his crowning and express their approval of his rule by their shouts. This they did, and ever since have always exercised their right at the coronation of subsequent kings and queens.

Mr. Johnston expressed the thanks of the Association to Dr. Gow for his reception and discourse, and referred to the architectural features of the Hall. He said that the roof erected in Elizabethan times was modelled on Gothic lines as in the Temple. The hammer-beam construction was essentially English, and was not found abroad. The tracery in the window near the dais was about the date 1320. He had made a drawing of a window that dated back to Edward the Confessor's time, and presented it to Dr. Gow. He pointed out a Norman doorway of the Confessor's time, and regretted the disappearance of a Norman arcade which had entirely vanished.

The members were then conducted to the site of the refectory, the corbels of the roofs of which remained. This was the interior of the north wall of that building, which was somewhat narrow, the monks not attaching so much importance to the place wherein they had their meals as to that in which they worshipped. There was here some early Norman arcading which Mr. J. H. Parker had perpetuated in a very perfect drawing. There were disputes about dates, some contending that Edward the Confessor had not had time to accomplish very much, and that most of his work was of wood. This Mr. Johnston disputed, and he attributed this arcade to pre-Conquest Norman work and esteemed it as very precious. The upper part of the wall was probably the work of Abbot Litlington.

The company then passed on to the Little Cloister, which was part of the infirmary buildings. The stone arches had been attributed to Sir Christopher Wren, but this was doubtful. The stone arcade was late Norman work, and Mr. Johnston pointed out an interesting bit of coloured walling consisting of alternate cubes or squares of tufa and tiles. The mediæval Hall was examined with its windows of 1370 date, its early woodwork, bench ends and screen (c. 1360). It was the refectory hall of the infirmary, and is now used as the school dining hall. It is all Abbot Litlington's work. The upper lights of the windows were for glazing, the lower part was covered by shutters. No trace of the old fireplace has been found. The roof is of fourteenth century date, and all the rafters are old.

The company then visited by kind permission of Archdeacon Pearce the remains of the infirmary chapel, a little-known late Norman edifice (c. 1160), and its decorated entrance doorway (c. 1350). The pillars of this arcade were seen to be octagonal and circular alternately, and were erected in the time of Henry II., about 1160. The ornamentation was scalloped with embattled moulding and zigzag. In the west bay of the south aisle of the chapel is a late Norman window, and above is seen the fireplace of a chamber where the night watcher of the sick monks kept vigil. The patients would lie on couches in the nave of the chapel.

An adjournment was then made to the chapel of the Pyx, which was the Royal treasury where the trials of the coin of the realm took place. This was part of the work of the Confessor. The arches remain, and we see the earliest form of quadripartite vaulting without ribs. The stone was the pale green firestone of the Surrey quarries and Caen stone from Normandy. The old altar, probably Norman, remains, with a hole in the centre for relics and a pillar piscina of the thirteenth century. Mr. Johnston pointed out the primitive drum columns with the angles of the abacus shaved off and the elaborately carved capitals with conventional foliage of about 1150. Here are stored two ancient chests, one of which is called the treaty chest. The next place visited was the ancient crypt wherein are preserved many relics of the Abbey, and our guide pointed out the "Cambridge Ark," an ancient chest with strong ironwork. It is the oldest chest in existence, and dates back to the twelfth century.

Mr. Dale, F.S.A., said a few words concerning the waxwork effigies of the kings and queens of England, which are fully described in an article in "Archæologia" by Sir William Hope. They are funeral simulacra, and from the tattered condition of the costumes have been known as the "ragged regiment."

(*To be concluded.*)

THE LATE HORACE PORTER, F.R.I.B.A.

Horace Porter, M.A., F.R.I.B.A., was educated at Uppingham and Trinity College, Cambridge, where he rowed in the First Trinity 4th boat, and was in the front rank of players at both tennis and lawn tennis. Later, as captain in the 3rd Kent V.A., he was winner in the Position Officers' Team Competition of the N.A.A. in 1894, 1895 and 1896. For many years he was well known in amateur circles as a keen and sound violin player. He married in 1901 Mary, youngest daughter of the late G. P. Bidder, Q.C., of Mitcham.

He studied architecture under his father, the late F. W. Porter, F.R.I.B.A. Besides important private work, Mr. Porter and his father occupied in succession the post of architect and surveyor to the Sun Fire Insurance Office for just fifty years, and that of surveyor to the Clothworkers' Company for about the same period. Father and son also alike passed the chair in the Saddlers' Company, F. W. Porter being Master in 1895-96, and Horace Porter Prime Warden in 1916-17.

Mr. Porter was Past Master, and for ten years secretary of the Marquis of Dalhousie Lodge of Freemasons, and Past Grand Treasurer in the Mark Mason's Degree. He was one of the original members of the Holborn Borough Council, and mayor in 1910-11. He died on July 29 at 16 Russell Square, where he was born in 1861.

A ROMAN BRICK IN EDINBURGH CASTLE.

By P. Macgregor Chalmers.

It was suggested in the note on St. Margaret's Chapel in Edinburgh Castle, which was published in "The Architect" on February 22 last, "that a chapel was built on the same site many years before St. Margaret came to Scotland, and that a considerable part of the early fabric remains to this day."

The evidence which appeared to warrant this suggestion was submitted to H.M. First Commissioner of Works, with the request that permission be granted to examine the building. This work was authorised, and a small part of the interior paving of the chapel was lifted on June 14.

The information which was then secured proves, I believe, that the rubble north wall of the chapel and the rubble lower parts of the south, east and west walls are of pre-Margaretan date, and that what was executed for St. Margaret, towards the end of the eleventh century,

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was the ashlar work on the south, east and west walls, above the level of the chapel floor.

The surface of the rock upon which the chapel stands is 2 feet 7 inches below the floor level on the north side, and about 9 feet below the floor on the south side. As the rock was reached, near the centre of the chapel floor, at a depth of 4 feet, the slope towards the south is fairly uniform. It is evident that the rubble masonry was not introduced below the ashlar, at a later period, because a great part of the rock on the south was removed, and the walls required to be under-built. The rock has not been disturbed, and the rubble-work is of earlier date than the ashlar.

Reference was made in my first note to the apparent carelessness with which the plan of the chapel was laid down; a carelessness not to be found in other works executed for St. Margaret. The early builder was not more careful in securing a true level for the roughly formed courses in his rubble masonry. St. Margaret's builder accepted both the general lines and the sloping beds of the earlier work. The lowest bed of the ashlar, at the west corner of the south wall, is exactly twelve inches below the level of the same bed at the east corner. The early rubble walls determined the lines of the later ashlar work.

The inside face of the rubble walling, below the level of the floor, is of the roughest possible character, and could not at any time have been exposed to view. The present floor level therefore is practically the level of the floor of St. Margaret's period. It is also the level of the floor of the earlier building. There is additional proof on this point in the east doorway in the early rubble wall on the north side. A great part of the masonry of this doorway has been destroyed, but there is sufficient evidence to show that the sill was near the present floor level.

The pre-Margaretan building was not square in the interior at the east end, but was fashioned as a semicircular apse. The foundations at this point were examined down to the surface of the rock. They project 2 feet 6 inches within the inside face of the walls, giving the impression that the early building, when complete, was of greater height and weight than that erected for St. Margaret. This semicircular east end suggests that the early building was not erected after Edinburgh passed permanently to the Crown of Scotland, about the middle of the tenth century, but that it was built at an earlier period still, by men of the Northumbrian school, who were influenced by Roman tradition.

When St. Margaret's builder accepted the rubble walls of the earlier building, he also accepted the early floor and all the material that lay beneath it down to the rock. It is difficult to suppose that he removed any part of this material. It has been discovered now that the builder of the early chapel—it may be in the eighth or ninth century—used the broken masonry and débris of a still more ancient building to fill in above the surface of the sloping rock to the level of the floor. The site of this very ancient building cannot be determined, but surely no builder would carry large blocks of stone and of cemented masonry from any great distance to the topmost pinnacle of the Castle Rock, to be used there for such a purpose. It is reasonable to assume that the building from which the débris came was part of an ancient castle on the Rock.

It was amidst this débris of ancient masonry, near the east wall, and at a depth of 2 feet beneath the floor, that I found the fragment of a Roman brick. It measures 6 inches by 4 inches by 1½ inches thick, and shows traces of mortar on both beds. Did the Romans, in the early centuries, recognise the strategic importance of this Rock, and erect a castle there?

The circumstances of the time made it necessary that my examination of the building must be limited in extent, to the end that it might be proved that St. Margaret did not build an entirely new chapel in Edinburgh Castle, but that her work was the restoration of an ancient fane. But as rubbish heaps have proved to be of great historic value, and there are about 45 cubic yards of material—part of the débris of ancient buildings—under the floor of the chapel, the hope may be expressed that, when better and happier days come, the entire pavement may be lifted, and all that is beneath the floor be subjected to the most careful examination.

HOW TO BECOME AN ARCHITECT.—II.

By A Man Who Has Been One.

Enough has perhaps already been said to justify my advice to a parent to apprentice his son—or article him, as it is now the mode to style the process—if he still intends to bring him up as an architect; and in the further observations yet to be made other reasons will be incidentally given in favour of this course. We will, therefore, now devote our attention to the important question of how to get him into an office.

But before the final decision is come to the parent should weigh well the cost of the whole business. Not only has he to pay a premium to the master, but he has to feed, house, and clothe his son during the period of his pupilage, provide him with sufficient money to pay for the classes he has to attend and various small fees, and even at the end of the term to continue some sort of assistance until he has "become" an architect.

The choice of an office, and still more of the architect to whom it belongs, is a very serious matter in regard to the professional future of the boy; and it behoves parents and guardians to be particularly circumspect in making that choice. Definitions are difficult in a case like this, but we may safely advise an avoidance of all who advertise "a vacancy for a pupil" in their offices, remembering that an architect of repute does not much care to take upon himself the responsibility of such a charge; but it is precisely in such an office, if the opportunity should occur, that a young man has the best prospect of qualifying for his profession.

Some people would advise the budding architect to take a year in a builder's workshop before he soars into art. But this is a mistake and the time practically wasted in studying exclusively some small detail of a subject which ranges over all the arts and crafts. I once knew an architect who had had, if not a large, a very lucrative practice, who boasted that in a house he had built for himself he had made most of the moulded sashes and dished most of the w.c. seats with his own hand, and he invited me to inspect them; and I found that though he had succeeded in his joinery nearly as well as a paid mechanic, in the architecture of his house he had failed utterly.

The nature of an architect's duties is rarely understood by outsiders, and still less by the boys who aspire to become members of the profession; and, considering the state of flux it has for some time been in, not easy of definition even to a member of it.

Throughout the whole of the last century, while the idea of the modern architect has been crystallising, a process of the devolution of specific branches has been going on. At the beginning of it the builder-architect was not entirely extinct, for Sir William Chambers only died in 1796, and he, as architect, designed the building, and, as builder, carried it out in its entirety by subordinate tradesmen and artists, or what we should call nowadays sub-contractors; but by the end of the century we find that a large number of these duties have been taken over by other and independent professions. And now we have the builder or general contractor; the building engineer who deals with the metal-work construction; the land surveyor who plots out the site and takes the levels for the drains, &c.; and, lastly, the quantity surveyor, who takes off the quantities and is gradually performing many other of the architect's duties. The architect is thus left with a more or less nominal control over these various branches ("my builder," he says, and "my surveyor"), and represents the purely artistic side as the general designer of the fabric.

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If the architects of the new generation do not greatly bestir themselves they may find that, instead of driving this team they may become the driven, and relegated to the position of draughtsman-designer at so much the job.

But all architects, fortunately, have not become affected by this spirit of devolution of duty, but carry on their practices on the old-fashioned lines of the middle of the last century, doing their own designs and details, writing their own specifications, taking their own levels, and "putting out" or delegating none of the business supposed to be within the ambit of an architect's duties; and to one such as these the youth should be sent.

Enquiry among friends, or particularly among solicitors, can scarcely fail to lead to the discovery of some architect of the kind above indicated, who may be induced to take a pupil; but whatever the difficulty, advertising the fact that a premium, with a boy attached, is going begging will bring in plenty of offers mostly of an indifferent if not of an objectionable character. Therefore avoid that course of proceeding.

If the parents happen to reside wholly in the country they are apt to suppose that it will be advisable to put their boy with a London architect instead of one in a provincial town, so as to secure all possible advantages. But there are drawbacks to a London practice in that it is apt to be more specialised, both in its general character and in the way in which London architects "put out" so much of their work that, perforce, a country architect must do within his own office and by his own assistants.

Thus in London, for instance, the specification writing is frequently delegated to the quantity surveyor, and the quantities themselves always. So that the pupil's only chance of learning these essential parts of practice is by attendance on classes or by reading them up in books, thus gaining at best only a theoretical knowledge; whereas in the country practice such work is done in the office, and the pupil soon takes his fair share in it.

The ideal master to find—and, as some have found him, others may—I will sketch from the life. His practice is a long-established one, thanks to his predecessors, embracing a large family connection and several important City appointments; it is therefore very varied in its character and perennial in its flow and quite independent of chance competitions. Of artistic temperament, he had travelled and sketched considerably; a strict upholder of professional etiquette, somewhat austere in manner, but easily accessible for advice or counsel to students and younger architects. Such is the ideal master—let those who can find him.

One important consideration to bear in mind is the prospect a youth may have of getting any work when he shall have qualified himself for practice. Perhaps the position of the father may be such as to make sure of a large circle of sympathising friends who may, later on, be willing to entrust his son with their architectural work, and even promise to do so. But such a promise must be purely speculative and but a fragile reed on which to lean.

Perhaps the prospective master may have a daughter, and apprentices have married their masters' daughters before now with effect; on the other hand, he may have no children or anyone to whom to delegate or leave his practice, when great opportunities for a capable pupil are within the range of possibility. But all these are in the air, and on his own right arm he will have mainly to rely for his ultimate success.

Wherever it is possible the youth should keep up the acquaintance of his schoolfellows, unless they be undesirable, as he never knows how valuable they may become to him in after years, and, of course, a public school affords the best chance for this. To this I owe more than one important success. In one case a schoolfellow happened to be cousin to a noble marquis, and through his personal introduction of me to his lordship's solicitor I secured the rebuilding of one of his important London estates in a prominent position.

Unless some such friendly backing is to be obtained the young man's chance of success will be heavily handicapped. A client rarely cares to entrust perhaps some thousands of pounds to a new and untried man without some powerful recommendation, since failure would mean to him a heavy pecuniary loss. If the would-be architect has to tell a client that has has not, as yet, built anything, he is likely to be told that only a man of experience can be entrusted with the work.

But let not the wail of J. B. Waring, already quoted, prevent the youth who means to be an architect from taking steps to become one. The opportunity comes to every man; let him therefore be ready to

> "Seize the skirts of happy chance,
> And breast the blows of circumstance,
> And grapple with his evil star."

BRITISH SCIENTIFIC PRODUCTS EXHIBITION.

The British Science Guild are opening an exhibition, by permission of the Ministry of Munitions, on August 12, which will remain open until September 7. It will be held at King's College, Strand, W.C. Professor R. A. Gregory, the Chairman of the Organising Committee, in calling our attention to the fact, states the exhibition will show that by combination of science and industry we have done nearly as much in the four years of war as the Germans did in the preceding forty. More than 250 manufacturers are sending exhibits, and the Air Ministry will make a large display, as well as the Food Production Department.

The main object of the exhibition is to let the public understand that our scientific men and manufacturers can surpass German effort when conditions of development are favourable; and to establish for the future the independent position now achieved.

Knowing Professor Gregory as we do, we have no hesitation in stating that a visit to the exhibition will be both interesting and profitable.

THE TIMBER INDUSTRY.

By Mr. Percy Grdom, M.A., D.Sc., F.L.S., Professor of Technology of Woods and Fibres, Imperial College of Science and Technology.

(Continued from last week.)

The tendency for opposite effects to be induced in pine and ash timbers by widening or narrowing of the annual rings explains one practical matter in connection with parts of aeroplanes in which the wood is used in the form of thin laminæ or is spindled out; the pine must not be wide-ringed, whereas the ash must not be narrow-ringed. Another practical lesson in this connection may at once be learnt by anyone observing the variety of qualities or grades of blocks of Scots pine paving streets in London. He will then note that in certain parts of London the use of inappropriate grades of this wood causes great economic loss and unnecessary public inconvenience.

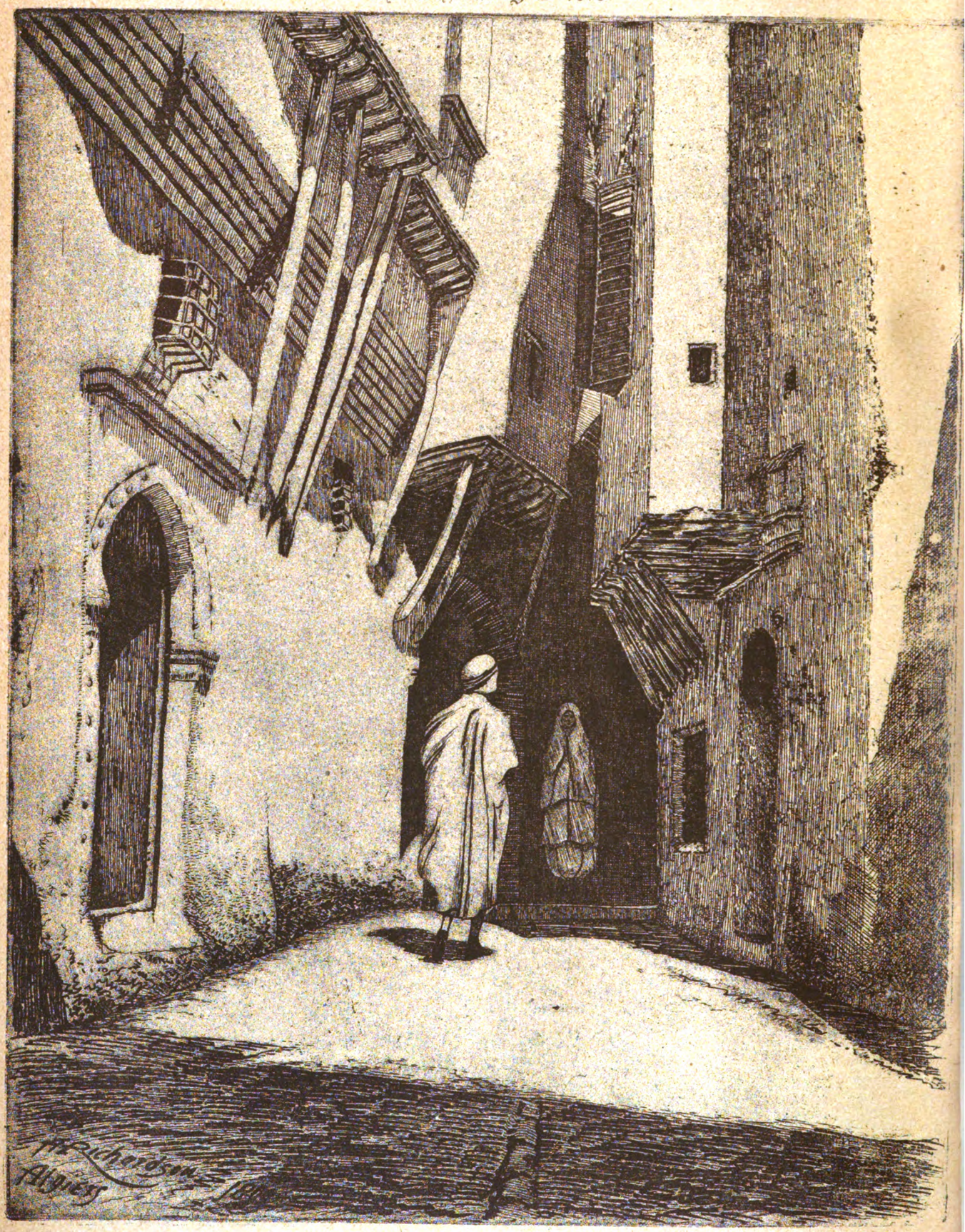
Mechanical tests on timbers, apart from providing one of the bases for sound forestry, are of value in yielding the necessary information as to the minimum dimensions required by constructional wood used for specific purposes. They thus render possible the utmost economy and the substitution of one wood for another.

Afforestation in Great Britain can yield considerable supplies of softwoods only many years hence; consequently the provision of substitutes in the form of hardwoods grown specially in British tropical Colonies would be of great economic importance if practicable. There are, however, both technical and commercial difficulties in the way.

The extensive use of softwoods as structural material is due to several sets of factors. First, coniferous trees grow in the north-temperate regions, forming

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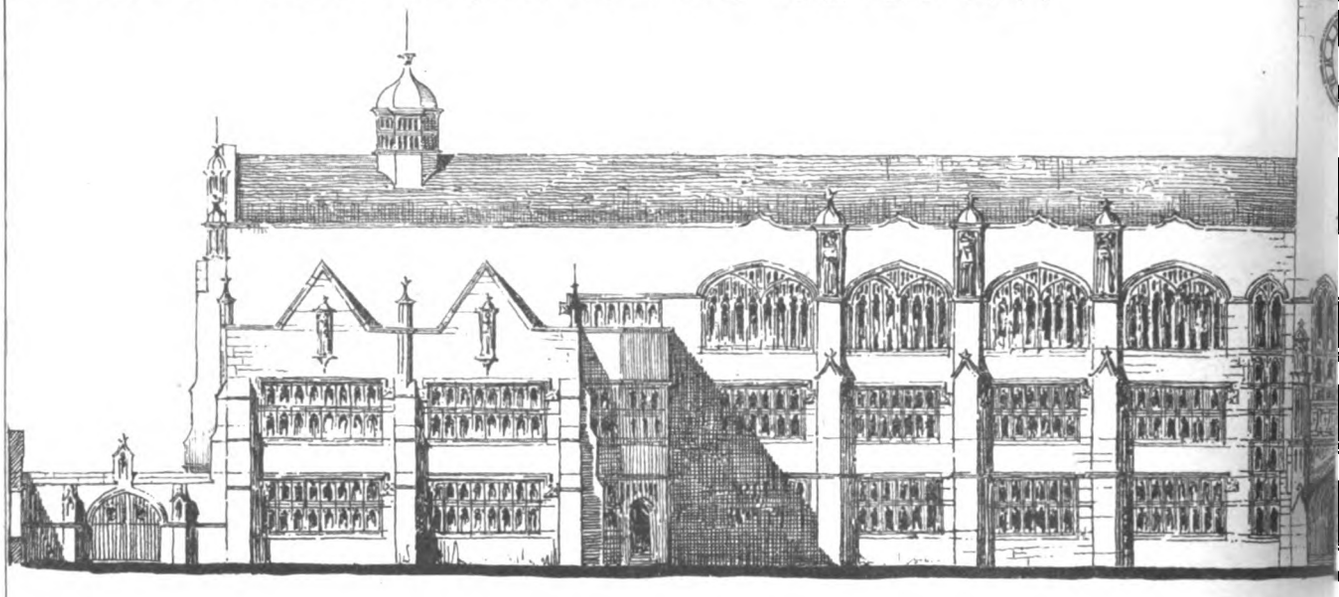
A VIEW IN ALGIERS.

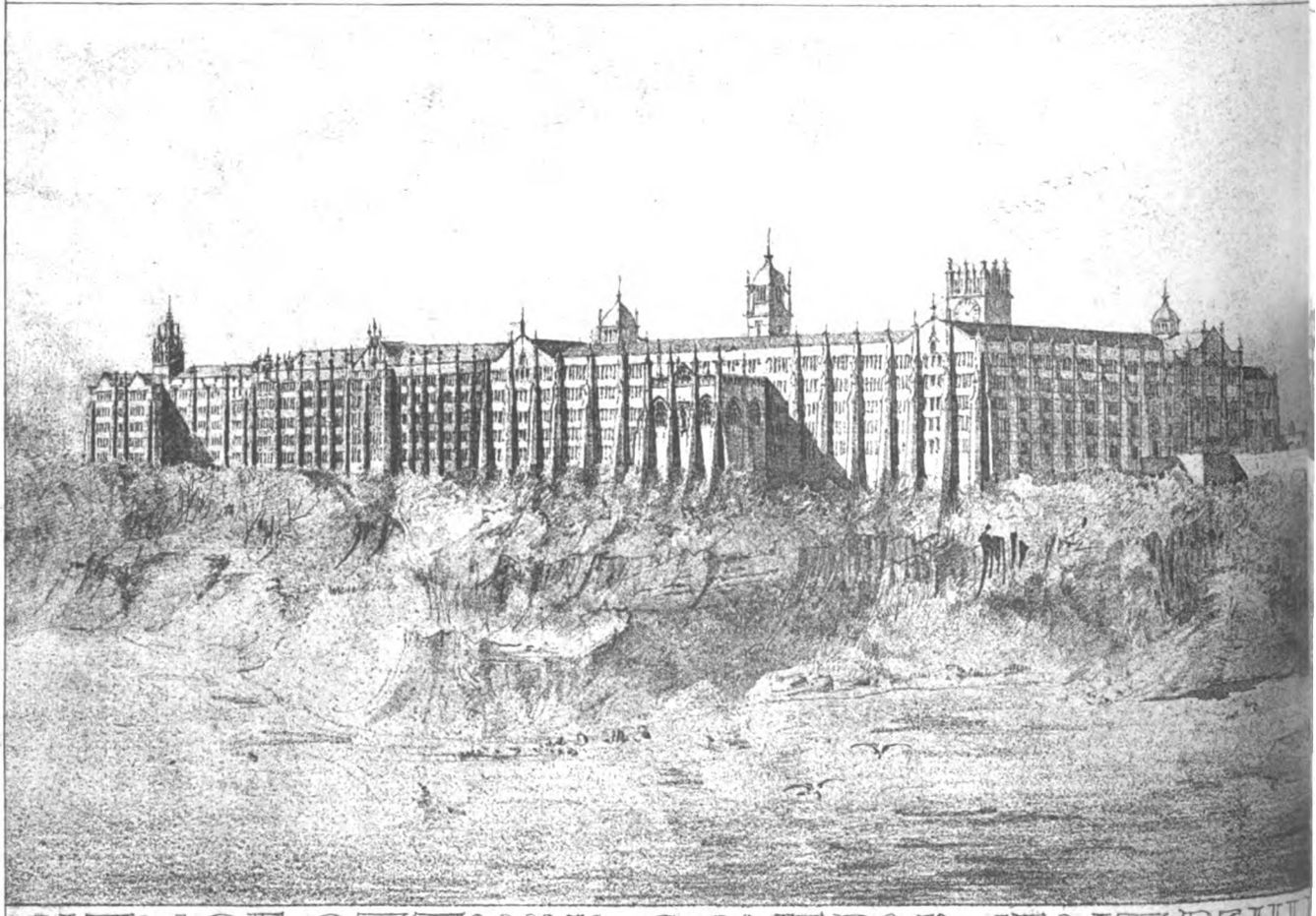
By A. RICHARDSON.

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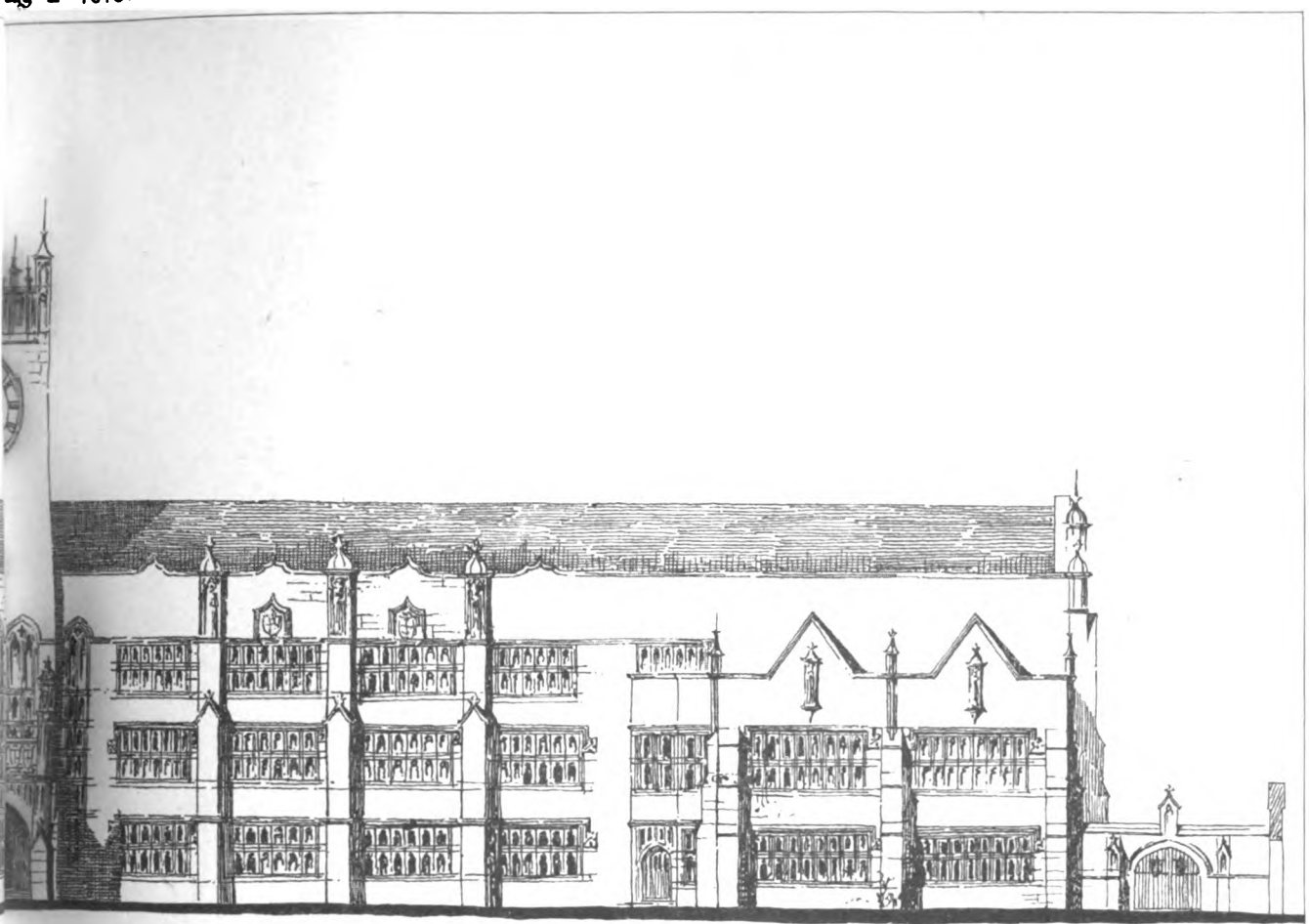
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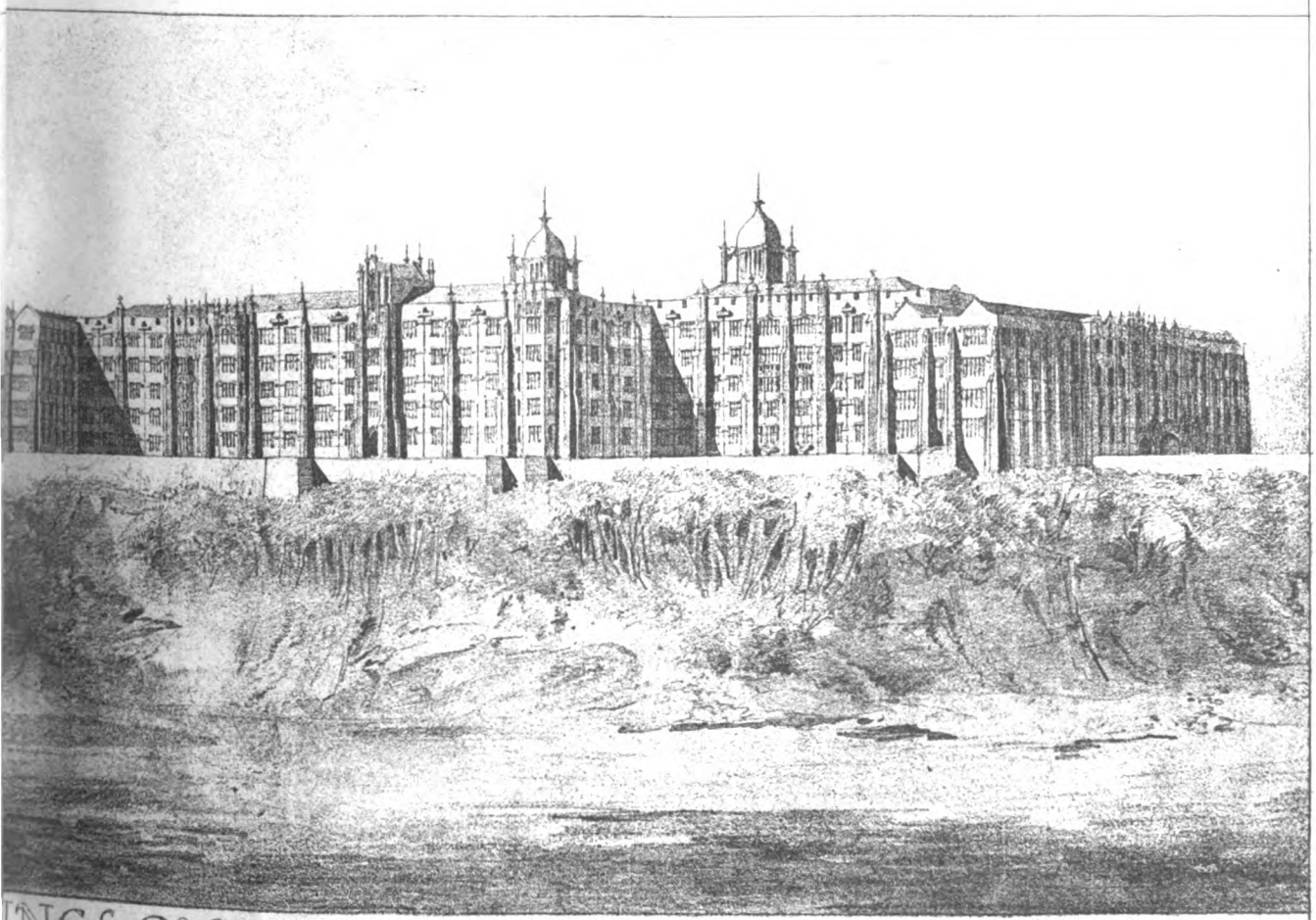
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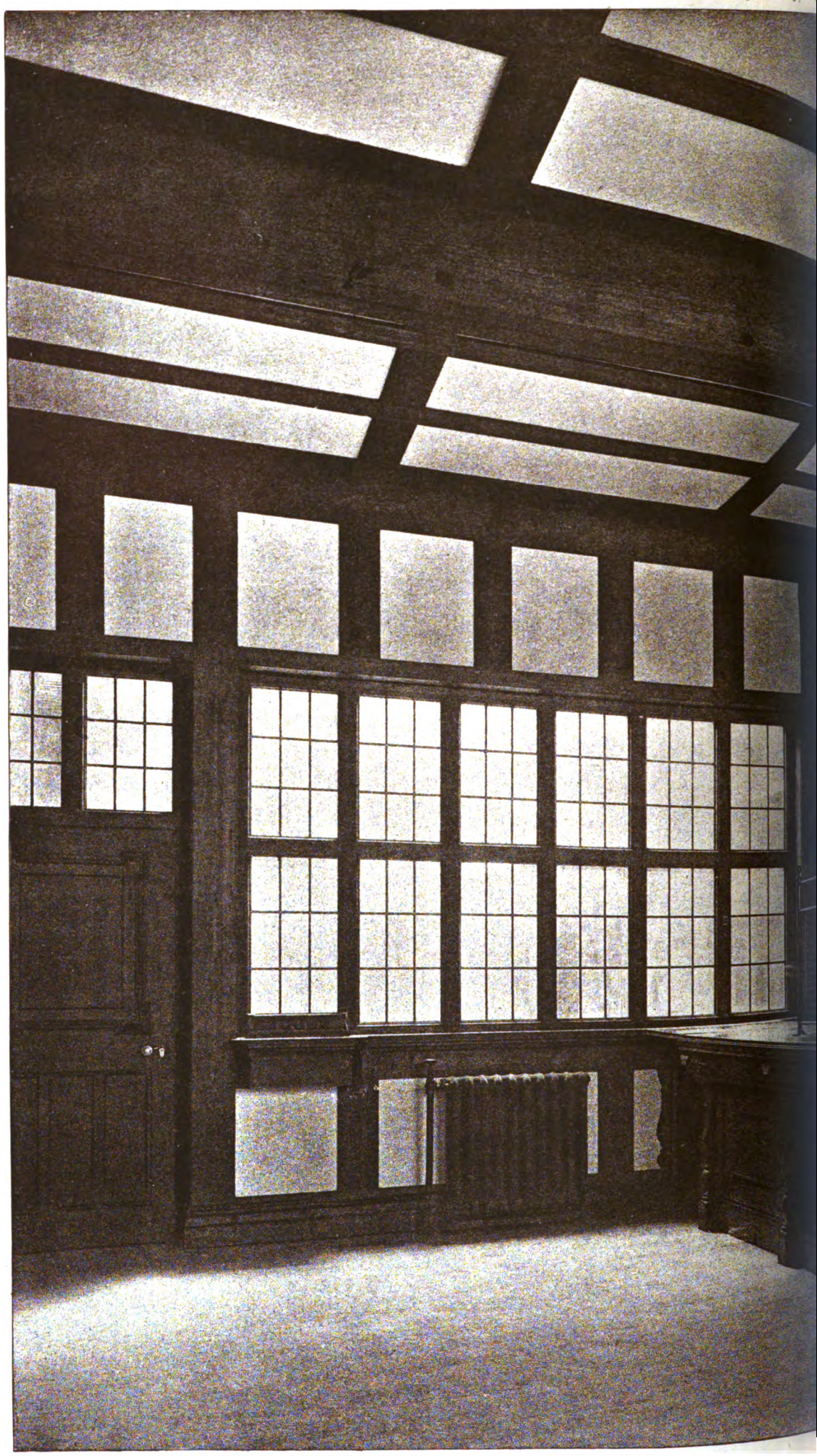
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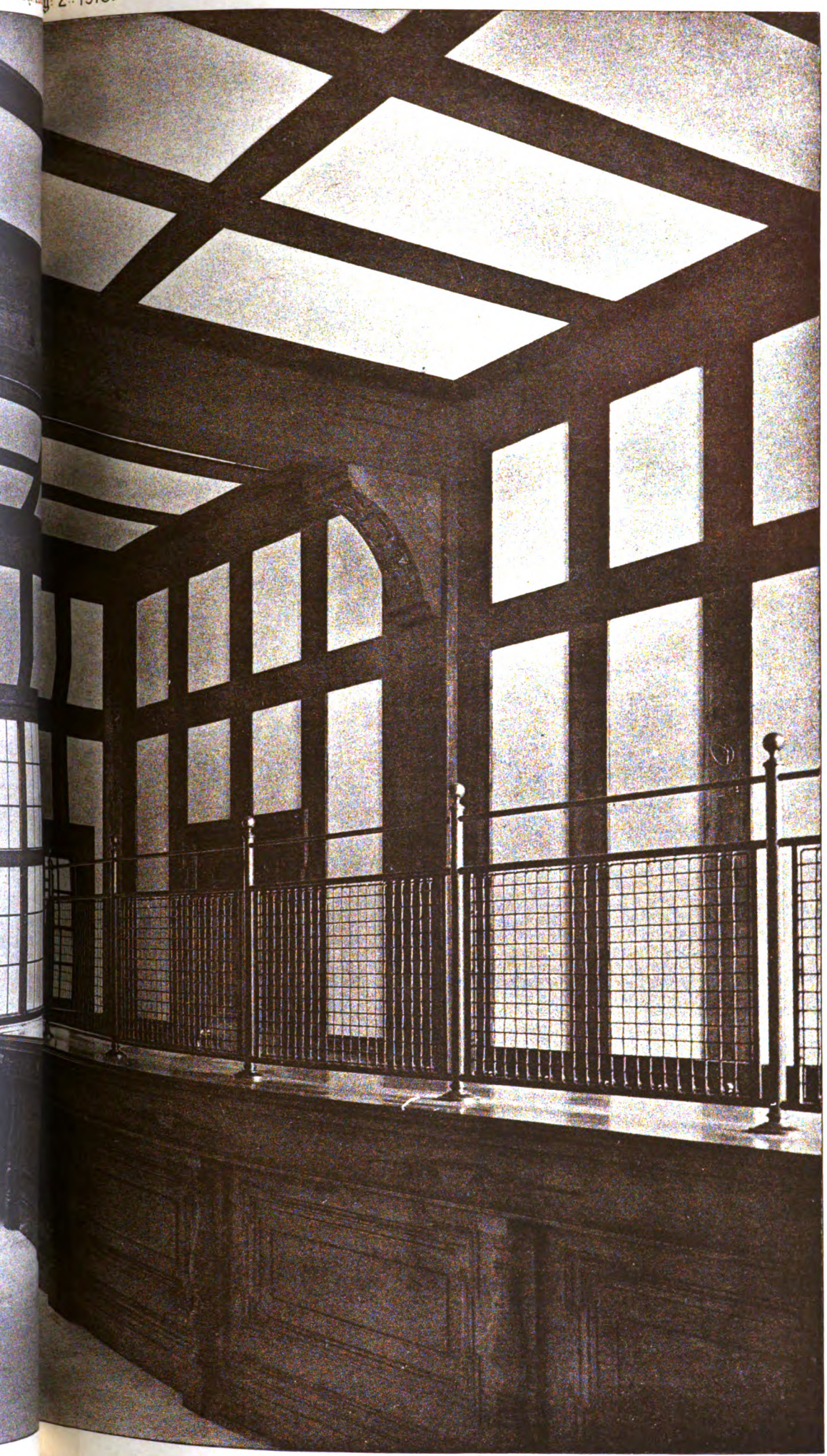


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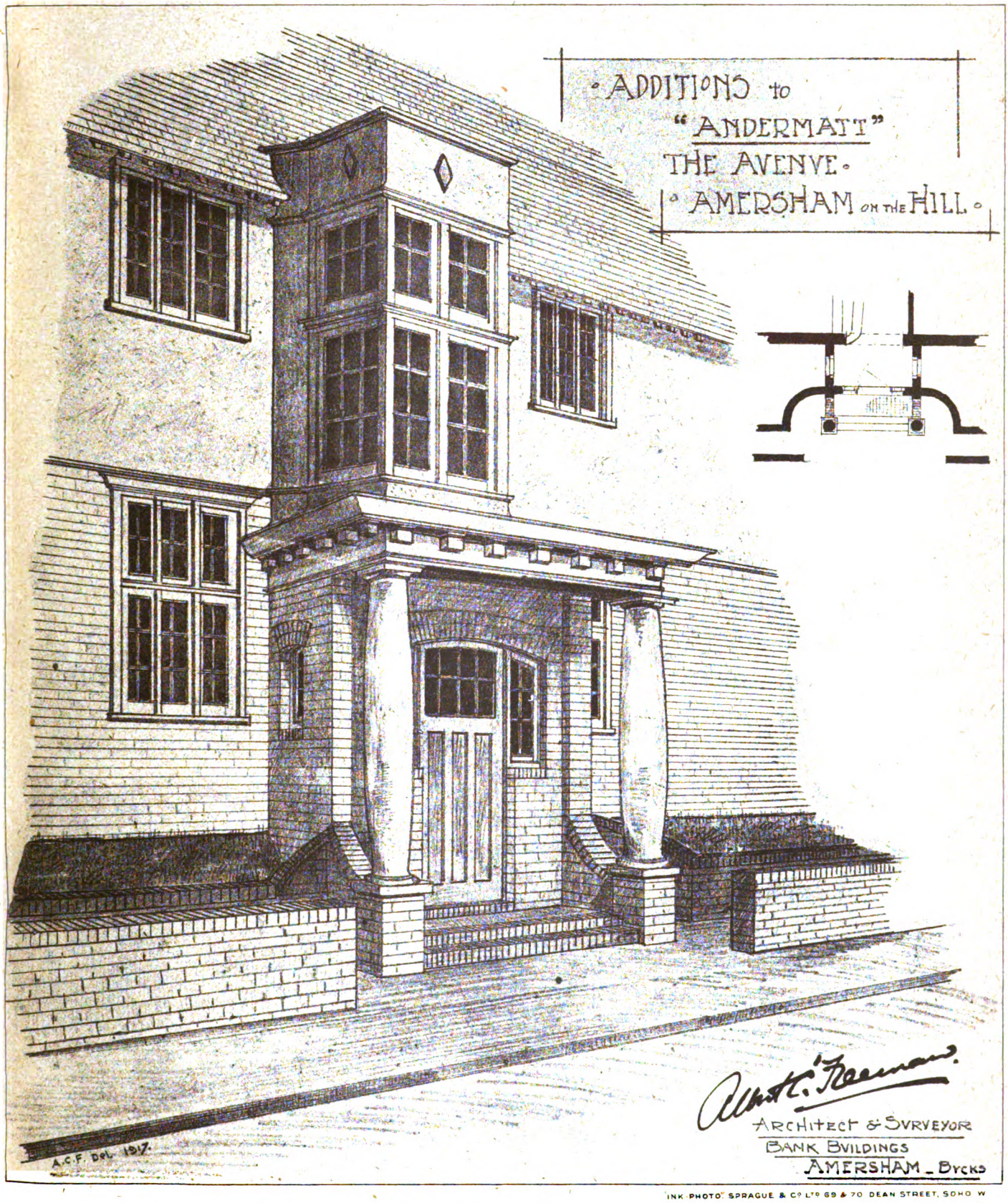
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NORTHAMPTON OFFICE. INTERIOR.

BON, ARCHITECT

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ADDITIONS TO "ANDERMATT," THE AVENUE, AMERSHAM-ON-THE-HILL.

MR ALBERT C. FREEMAN, ARCHITECT

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forests that are pure or contain large numbers of the same species of tree. Softwoods are thus accessible, and can be obtained cheaply; this is specially true of Baltic softwoods. These coniferous timbers are usually easy and cheap to work, often display high strength-values when compared with their weights ("specific gravities"), tend to shrink less than hardwoods, and generally are more easily and rapidly seasoned than are the latter, while as sources of fibre and paper they yield a very high percentage of fibre.

On the other hand the hardwoods abounding in the vast forests of the British tropical and southern Dominions and Colonies are generally more distant, for even the West African Colonies are further away than the Baltic. Moreover, the hardwood trees in them grow together in mingled confusion, hundreds of different species growing side by side. Consequently definite kinds of hardwoods are less accessible than are softwoods.

Yet many of the hardwoods have certain advantages on their side. In moist tropical countries their growth is generally much more rapid than is that of the northern conifers, and there is no present demand for certain of them, indeed in some cases they represent obstructions that have to be removed and destroyed. Considering the amount of loss involved in the artificial destruction of tropical trees, the utilisation of such waste wood forms a problem of first-class economic import. Investigations will show that numbers of these inferior neglected woods can be utilised either as substitutes for softwoods of the better quality, or as fibre-yielding material to be used in the manufacture of paper, or chemically to yield alcohol, and so forth.

As regards hardwoods of better quality, and often greater weight, some may be employed as substitutes for hardwoods—such as oak, teak, and mahogany—that are partly imported from non-British countries, or may be more vigorously exploited in foreign lands. But to accomplish these aims full information as to the mechanical and working properties of such woods is required. We have very little detailed information as to the mechanical and other properties of such timbers. Yet investigations conducted during the present war have demonstrated the suitability for use in aeroplanes of certain mahoganies and other hardwoods from British West Africa, Papua, Queensland, British East Africa, and India, and of certain softwoods from New Zealand and British East Africa.

These considerations lead once more to the study of the structure of timbers, whose significance in affording guidance to the quality and uses of woods has already been indicated. Research into the structure of timbers is also necessary as a means of rendering possible the critical identification. Such identification is needed in order that a person shall secure exactly the kind of wood that he requires. At present the commercial nomenclature of timbers is in confusion. For instance, in various parts of Australia the same names are applied to different timbers, and different names to the same timber: such practice militates against the sale of these woods in this country, for it may be said that every kind of wood has certain uses for which it is fitted better than any other. To select another example; a number of kinds of wood varying widely in colour, structure and properties, are sold in this country under the name of West African mahogany. Apart from the disappointment experienced frequently by purchasers, and the consequent tendency for West African mahogany to be discredited, this particular case is not devoid of national significance. I believe that the most motley array of such so-called mahoganies before the war came from the German Colony, Cameroon, which did not export anything like the same quantities as did the British and French Colonies. The natural result would be that the wrong attachment of the name of mahogany to the German spurious mahoganies would inflate their price, while lowering the price of British and French woods. In importing the latter Germany would profit doubly.

So far no reference has been made to the great part played by water present in wood. By exhaustive tests it has been proved that the strength, stiffness, and hardness (when measured by indentation), of one and the same piece of wood vary inversely as the amount of water contained in the wood-substance itself. The pliability and ductility of wood, on the contrary, increases with rise in the water-contents, and greatly so if this be accompanied by rise in temperature. Wet-steamed wood can, therefore, be compressed to form railroad keys or bent to yield furniture; whereas very dry wood permits of only slight deformation, and in this sense is brittle.

So far two reasons exist in favour of drying wood before use—decrease of weight, and improvement of mechanical qualities; and these are accompanied by a third, which is associated with the changes of shape and dimensions of wood as it absorbs or emits water.

When once all the water has been removed from the cavities of the wood (and even before this when drying is relatively rapid) wood shrinks steadily as it continues to dry. Shrinkage is far the least along the grain; while across the grain it tends to be much greater circumferentially than radially. Hence, during drying, a piece of timber would undergo considerable distortion were it not that wood possesses ductility. As a matter of fact such distortion in the form of warping or twisting often does take place in bastard-cut boards or planks when the process of drying is carried on too rapidly, and the warping may be accompanied or replaced by splitting in a radial plane.

This differential shrinkage along and across the grain partially accounts for the practice of cutting up highly figured wood and knotty burrwood into thin and relatively small veneers. Somewhat akin to this veneering process is that of the manufacture of ply-woods. In three-ply wood, for instance, as the outer sheets or plies have their grain in a direction at right angles to that of the middle sheet or ply, the outer and middle plies tend to check each other's tendency to shrink or increase in surface. Moreover, since wood is much stronger along than across the grain the three-ply possesses a combination of transverse and longitudinal strength impossible in a single piece of the thickness equal to that of the three-ply. In ply-woods the plies glued together may number from three up to seventeen or perhaps more, and may be composed of a single kind or several kinds of wood. The manufacture and use of ply-wood is only in its infancy, and is bound to increase greatly, as, apart from the merits already mentioned, it renders possible the structural utilisation of cheap and relatively weak woods, which, if desired, can easily be impregnated with substances that render them decorative, fireproof, or resistant to decay. While ply-wood and the woods yielding them are practically exclusively imported from foreign countries, there certainly exist in the various countries of the British Empire timbers that are not being utilised at all or to the best advantage but yet are eminently fitted for use in ply form. But our knowledge on the technology of ply-wood requires amplification by research on a whole series of problems concerning the woods and adhesives suitable.

To return to the question of the relations subsisting between wood and water, it is known that a piece of wood continues to dry until at least its surface is in moisture-equilibrium with the water-vapour of the surrounding air. Thereafter it will absorb or exhale water according as the air becomes dry or moist, so that it is always shrinking or swelling. By limiting these interchanges of moisture, coatings of varnish, paint, and the like reduce such movements; but up to the present no one has solved the important problem of rendering wood absolutely impervious to moisture.

The preceding remarks provide sufficient justification for the seasoning of timber. Such seasoning was originally, and is still usually, accomplished by storing the felled wood in the open air, with or without a roof to screen it from rain and direct sunlight. This so-called "natural seasoning," being dependent upon climate, is prolonged and irregular, sometimes in abeyance and

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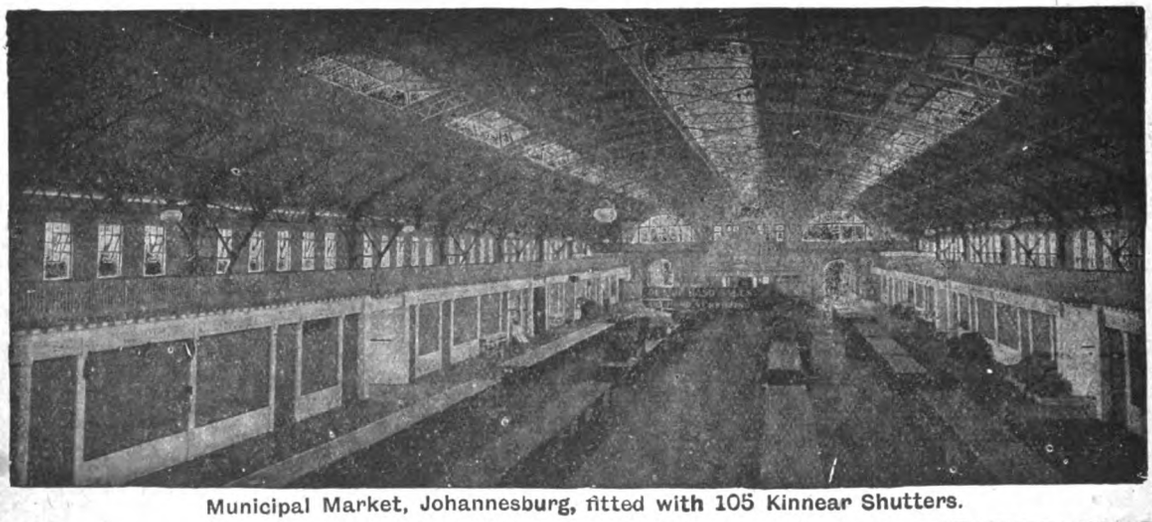
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at other times too rapid. The prolonged storage not only ties up capital, but also involves loss of wood through decay or boring insects; while its occasionally excessive rapidity introduces loss due to case-hardening, warping, or splitting.

The early discovery that seasoning is the consequence of a process of dessication led to the drying of wood by artificial heat. Primitive methods caused unduly rapid superficial desiccation and consequent development of defects (splits, brittleness and so forth). Improvements, including the regulation of temperature, moisture of the air, and air-currents in a drying chamber or kiln, have rendered possible the balanced drying of the inner and outer parts of the timber, and have culminated in modern methods by which wood subjected to the severest strains that it ever encounters, namely in aeroplanes, can be reliably seasoned in kilns. These results have been attained solely through the most careful research, involving the use of instruments registering the changes in temperature and moisture in kiln and wood, and including investigations into the causes of such defects as brittleness, case-hardening, collapse, explosive splits, and so forth. Not all woods are artificially seasoned with equal facility. For instance, the oaks among hardwoods and swamp cypress among softwoods require special and careful treatment; on the contrary, when compared with hardwoods, softwoods are more easily and rapidly seasoned, and can be safely exposed to higher temperatures, as their structure is less complex and their shrinkage generally less. Hence experiments are required to reveal the best, including the most economic, treatment of timbers of different kinds and different dimensions. Even when wood and dimensions are the same the most economic treatment will depend on the use to which the wood is to be put, and the urgency of the demand; for instance, walnut used merely for panelling can be exposed to much more rapid and drastic seasoning at high temperatures than if it is intended for use in the propellers of aeroplanes.

Such investigations will certainly repay the expenditure of time and money, not alone in the resultant saving of time but also in the economy of timber. As regards the former, by kiln-drying the time of seasoning is reduced from years to months, and from months to days, or, for certain purposes, to hours. While, as regards economy of timber, Tiemann calculates that in the United States the losses of timber due to natural seasoning are five and more than twelve per cent. respectively in softwoods and hardwoods, and that these can be reduced to two per cent. In view of the fact that in certain types of kiln-drying waste steam may be used, the economic significance of these facts is doubly clear.

(To be concluded.)

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Pitzhanger Manor.

SIR,—Mr. Bolton is kind enough to point out a slip in your notice on the subject that appeared in the issue for July 19. "Newgate Prison" should certainly be read for "Mansion House" in this review. Soane was with Holland *after* he served the junior Dance, and his hand is more observable here by comparing Dover House with the Bank of England. If Sir John Soane was not directly responsible for the façade of Dover House its influence marked the whole of his subsequent work, vide "Sir John Soane, R.A.," in "The Architect," October 13, 1911.—Yours, &c.,

ALBERT E. BULLOCK.

Belmont, Warwick Road, New Barnet, Herts:
July 27, 1918.

Industrial Councils.

SIR,—I am pleased to note the Government is making rapid progress in this good work for the building trade. We cannot go back to the old state of things. Joint Industrial Councils representing employer and employee should meet as often as necessary to discuss any difficulty or difference arising (however small). Let there be co-operation and agreement, and the men will work better.

I have no sympathy with the wild workman or the reactionary employer.—Yours, &c.,

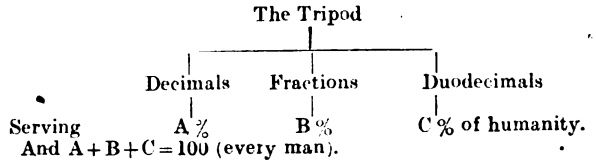
JAMES H. ASH.

Devizes: July 26, 1918.

Weights, Measures, and Currency.

SIR,—After a further careful study of Lieut. Martin's paper on the Metric System, it seems to me quite obvious that nothing but a world-wide return to the tripod, or triple scales in weights, measures, and currency, will satisfy democracy. The tripod has been already described in your columns and elsewhere, in my book, in "Indian Engineering," in a paper read by me before the Concrete Institute, and in "Whitaker's Almanack" and the "Daily Mail Year Book," both for 1918.

The position is this:—



Whether the meter which will be adopted for the tripod is 39.6 inches or 39.37 inches, I leave A, B, and C to fight out.—Yours, &c.,

E. A. W. PHILLIPS, M.Inst.C.E.

Rawdon House, Aymer Road, Hove:
July 27, 1918.

Strikes and Strikers.

SIR,—The strikes at Coventry and Birmingham are happily over. The Government have dealt wisely and firmly in the matter as suggested in your note over the trouble at the aircraft factory. When we remember the men who are working in the trenches at the Front, it is impossible to think of men slacking here in safety and comfort, and no strike should be permitted during the war of any sort or description. Having stated that, may I point out the other side of the question, and offer perhaps a suggestion which is worth consideration? The man in the Fleet and the man in the trenches gets his leave and comes home to enjoy it. May it not be possible that many of the men who were led away by pro-Germans, sedition mongers, and all the other cranks who are unhappily to be found in our midst, were suffering with war weariness, and the chance of a few days holiday after all was what appealed most to many of these men? In many large works it might be possible with safety to arrange matters so that a short holiday could be given to men who for four years have stood to their work. For the agitator, the Army or the Navy is the best place, and in this case the best and quickest cure would be the blue serge of the Navy or the khaki suit of the Army. No man is indispensable, and therefore the position in this country should be, that he who will not work must fight!—Yours, &c.,

"STICK IT."

Croydon: July 30, 1918.

MR. AND MRS. J. F. DRUGHORN, of Lancaster Gate, have decided, in memory of their son killed at the Front, to endow King's School, Canterbury, where he was educated, with laboratories at a costof £25,000.

THE death is announced of Mr. Joseph John Knewstubb, A.R.I.B.A., for the past eighteen years architect and surveyor to the Penrith Council. The deceased, who was forty-nine years of age, was the eldest son of Mr. William Knewstubb, contractor, Long Marton.

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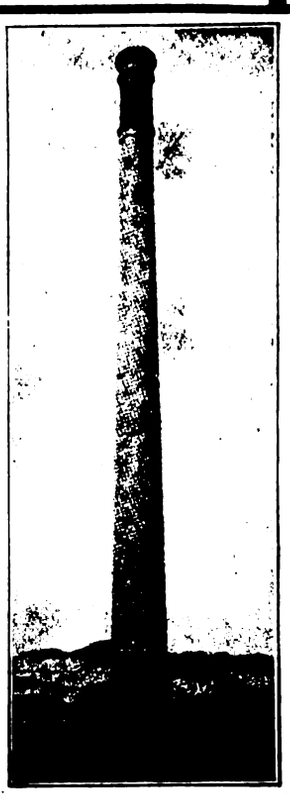
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THE ARCHITECT

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FORTHCOMING EVENTS.

July 12 *to August* 10

Art Gallery, Rochdale. Exhibition of Government Housing Schemes and Town Planning Schemes in Bolton, York, Birmingham, Dublin, Rochdale, &c

August 12 *to September* 7.

British Scientific Products Exhibition at King's College, Strand, London, W.C.

TRADE AFTER THE WAR.—I.*

The Reports of the Departmental Committees appointed to consider the position of certain trades after the war have a special interest for the trades immediately concerned; and in some, if not all, of these reports the building trade is directly interested. But they have also a more general interest to traders in general, firstly, because they illustrate the disastrous consequences of our policy of so-called Free Trade as conducted under the political conditions prevailing just before the outbreak of the Great War; secondly, because they prove the extraordinary efficiency of the opposite policy pursued by German traders in alliance with the German Government; and, thirdly, because they contain some valuable suggestions as to the measures necessary to re-establish our trade, the military strength of the Empire, and a more healthy set of political conditions in Great Britain. We propose to deal with these three aspects of these reports in this and the two succeeding articles.

We think that the conclusion that any impartial person reading these reports will draw from their perusal is that the policy of so-called Free Trade, as conducted under the political conditions prevailing just before the outbreak of the Great War, was the main cause for the acuteness of the danger to our national existence which at once manifested itself upon its outbreak. Indeed, they go far to prove the proposition that, if the war had been postponed for another ten years, Europe, and possibly the world, would have been at the feet of Germany. That policy was fast destroying our trade. It was destroying it directly by the encouragement which it gave to our competitors. It was destroying it indirectly, firstly by the obstacles which it placed in the way of any sort of organisation, and secondly by the political conditions which it produced.

That our trade was being directly destroyed as a result of the policy of so-called Free Trade, and that the trade of our competitors was increasing as the result of the opposite policy, is proved by these reports. Thus, in the Report on the Iron and Steel Trades we are told that the result of the McKinley Tariff on the tinplate industry was disastrous to us, but established the industry in the United States of America. The United States of America made one ton in 1891, whilst in 1915 they made 1,056,000 tons—an amount exceeding that manufactured in the United Kingdom. We are told also that as the results of the opposite commercial policy pursued by England and Germany the two countries have revised their respective positions with respect to the iron and steel industry, so that whereas Germany was formerly the consumer, and Great Britain the producer, in 1913 Germany was making about double the British production. It is clear, therefore, as is pointed out in a note to the Committee's report, that we should return to that policy of Protection on which the supremacy of the British iron and steel industry had in the past been built up. In the Report on the Electrical Trades we are told that while the total value of the electrical products of Germany was £60,000,000, that of Great Britain was £22,500,000, and that of this £22,500,000 a large part was produced by concerns under foreign control, and "in the case of British exports a proportion is known to consist of foreign manufactures reshipped as British goods."

Our trade was being destroyed indirectly by the absence of any kind of organisation. The policy of *laissez faire* was simply individualism run mad. The small works of the British manufacturers could not compete with the large combines which they were obliged to face. They could neither keep abreast of modern improvements nor manufacture on a scale which enabled them to sell at the same prices as their competitors. Our technical education was not organised; and many of our manufacturers were blind to the advantages to be secured by a staff of competent scientific men who could keep their manufacturing processes abreast of the needs of the day. Both the United States and our own Colonies had seen that our policy of Free Trade made dumping possible—that foreign States could tide over bad times and help to ruin our industries by selling their goods here at unremunerative prices. They had legislated against these practices; and we had refused to legislate. The result upon the iron and steel trade of this country—a trade upon which our national safety depends—was disastrous. The Commissioners state that it "has only been permitted to exist in so far as it did not cross the path of the development of its fellows in Germany and America."

The same causes had operated to prevent any well considered system of transport arrangements. It was found that "British railways are prepared in many cases to carry imported iron and steel goods over given distances at a cheaper rate than they will quote for British goods of the same class to be carried over equal distances by similar routes." But perhaps the worst result of our Free Trade Policy was the inability of the British manufacturer to get profitable undertakings financed owing to the absence of anything like a Trade Bank. On the other hand, foreign projects were financed in London, and the money so raised was spent on foreign products. As the Committee on the Engineering Trades point out, the fact that the money is raised in this country should carry with it the obligation to purchase with it British goods. In this anomalous state of affairs we may see the hand of those international financiers, whether naturalised or unnaturalised or members of the Privy Council. They are the real "hidden hand," who, in defence of their vested interests, and under the guise of supporting Free Trade, will defend the old *régime* to the last. Was it due to them that the Treasury refused

* Reports of the Departmental Committees appointed by the Board of Trade to consider the position after the War of the Iron and Steel Trades, the Engineering Trades, the Electrical Trades, and the Textile Trades.

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to sanction a project to establish factories for the manufacture of beet sugar which would have rendered us independent of all foreign supplies?

In fact the political conditions under which this system of Free Trade flourished aggravated all its evil effects. The Report on the Electrical Trades contains the most damning evidence of the way in which enterprise was hampered at every turn by the prejudices of Parliament and the local authorities, and by the regulations of the Board of Trade. But the most serious of the political effects of Free Trade were to be seen firstly in the world of labour, and secondly in the Department of Foreign Affairs. In the world of labour it taught both labour and capital to seek only their own interests and ignore the good of the State; and it led logically to the monstrous Trades Disputes Act which practically legalised private war in trade disputes, and put a strong weapon into the hands of those who play Germany's game by fostering those disputes. In foreign affairs it has deprived the British trader of support and guidance. Our consuls were in many cases Germans, and even now we are not certain that all our consuls are British-born. It is stated in the Report on the Engineering Trades that "several witnesses referred to cases in which members of British legations have told them politely that they could not be bothered with trade concerns." On the other hand, "the German ambassador and ministers, consuls, and other agents make it their special business to influence the spread of German trade. All openings for business are duly reported at home; the local agent or the visiting partner can always rely upon the active and intelligent assistance of all German representatives wherever he goes. When necessary to secure the contracts of local governments, the German minister on the spot takes an active part in inducing our Government to place the order in German hands."

The inadequacy of our blockade in the early stages of the war is notorious; and it is proved by cases heard in the Prize Court. Its inadequacy was due largely to the ignorance of commercial conditions engendered by our policy of Free Trade, and that ignorance has cost us hundreds of thousands of lives, because it has prolonged the war. Nor are we certain that these defects are as yet completely remedied. In the reply of the Foreign Office to the criticisms upon their waiving the right to visit and search the Dutch convoy we were referred to the arrangement made with the Netherlands Oversea Trust. But we were not told who were the members of that Trust, so that we could judge whether they were genuine neutrals or not, nor were we told whether any representative of the British Government is on the governing body of the Trust. The necessary secrecy in which the Foreign Office conducts its negotiations has been the cloak for much of the ignorance and negligence which years of Free Trade has engendered. But we would remind these officials and politicians that much of that shroud of secrecy will disappear after the war, and that, just as in private law gross negligence is equivalent to fraud, so in public law it may have, in time of war, results very much akin to high treason.

(To be continued.)

NOTES AND COMMENTS.

It is announced that Her Majesty the Queen has consented to lay the foundation stone of the extension of the Institute at the Hampstead Garden City on October 23. The building is erected from the designs of the architect, Sir Edwin Lutyens, and when completed will form an important architectural feature of the district. To complete the building and worthily house the high school and kindergarten with the schools of art and music and the other educational activities carried on, it was estimated that a sum of £25,000 would be required, but this was prior to the war and that amount will be considerably increased by the increase in costs of labour and material. Donations have been made of a sum of a little over £6,000, but it is hoped that this amount may be speedily added to.

The annual report which has been made by the lady almoner at St. Thomas's Hospital states that with a few notable exceptions—particularly the Duchy of Cornwall estate, which has now been largely rebuilt—the houses from which the hospital receives many of its patients are totally unfit for human occupation. Within a few minutes' walk are to be found streets of small houses that ought not to be inhabited, some of the rooms being unfit even for cattle. There is no provision for keeping food, shelves and cupboards do not exist, and in most cases the lavatories receive their sole light and ventilation from the door, which is in many cases open on public stairs or dark passages. There are no baths and generally speaking the water supply is only on the ground floor.

The sale of the Covent Garden estates of the Duke of Bedford to a company for two millions sterling effects a change of unusual interest and importance in the world of property, as for some hundreds of years the tenants of a great landlord have had reason to appreciate the justice and fairness of one of the greatest landowners of England. It is not surprising that the threats of Socialistic interference with property should induce some of our great landowners to part with their property, but tenants in many of such cases may regret the change. The great territorial landowners of England, whether rural or urban, have usually recognised that property has its duties as well as its rights, and have understood and appreciated the moral claims which their old tenants have possessed on their consideration; while departed feudal customs have been succeeded by a relationship which though undefined legally, has been perfectly well understood and acted on, in fact. The purely business relationships which exist between a company and its tenants are frequently less satisfactory for those tenants than the semi-patriarchal and wholly friendly relationships which have bound the tenants of the Dukes of Bedford, Westminster, and Norfolk to their landlords. The principle of *Noblesse oblige* still holds, we are glad to say, in our public life, and the old aristocracy of England have even, in these democratic times, shown its power and vitality to the great advantage of our national life. Custom is stronger than law, and often more enduring than institutions, and our aristocracy has, on the whole, proved its right to be the natural leaders of the democratic modern state which has been evolved in the course of centuries.

The Council of the Royal Institute of British Architects has awarded the Donaldson Medal to Mr. J. D. M. Harvey, B.A. (Arch.), on the recommendation of Professor F. M. Simpson. The medal is awarded to students of sufficient distinction in the University of London School of Architecture who obtain the first place in the architectural classes.

In continuation of the scheme prepared by the Dean and Chapter of Worcester Cathedral for filling the windows of the cloisters with stained glass representing the history of Christianity in the Midlands, two more memorial windows were dedicated on Friday by Lieutenant-Colonel W. R. Chichester, commandant at Norton Barracks. They were respectively in memory of Laurence Bernard Carlton, R.A.M.C., only son of Alderman Carlton (Mayor of Worcester) and Mrs. Carlton, who was killed in action on August 9, 1915, while attending the wounded in the Dardanelles; and of Lieutenant Francis Humphrey John Greswolde Williams, King's African Rifles, only son of Mr. and Mrs. Greswolde Williams, of Bredenbury Court, near Brom-

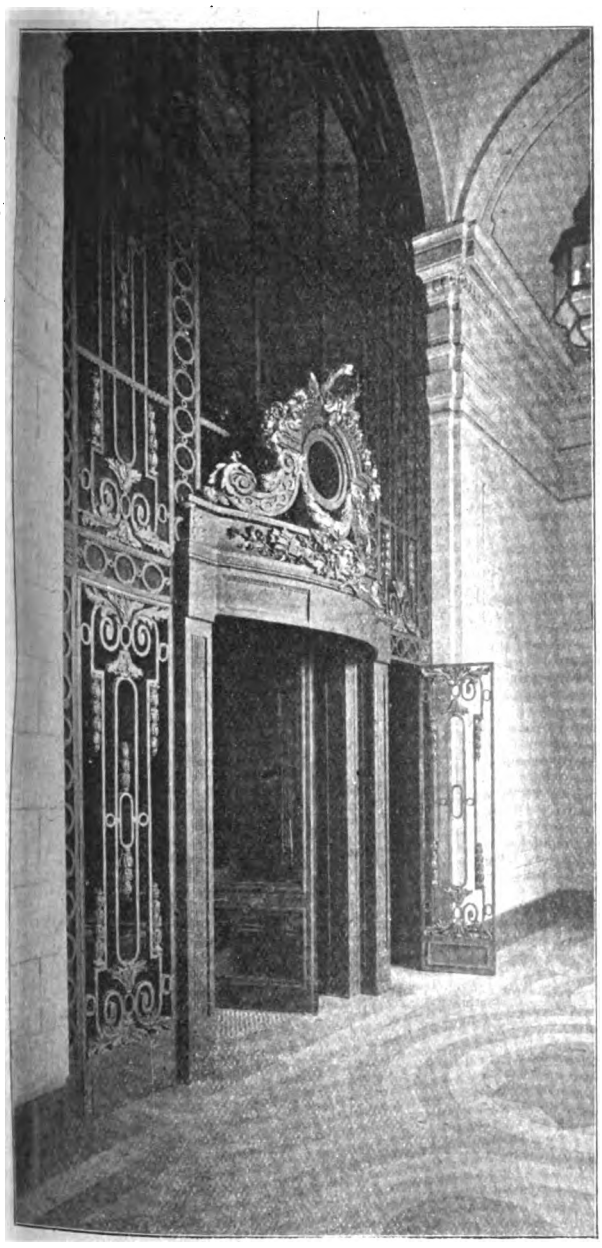
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yard, who was killed while leading his men in action in East Africa on August 2, 1917, five days before his eighteenth birthday. Mr. and Miss Greswolde Williams and Alderman and Mrs. Carlton attended the service, which was conducted by the Dean and Canon Wilson. The Dean, in an introductory address, intimated that the first window in the north walk would be put in in memory of the late Canon Knox Little.

ILLUSTRATIONS.

AUSTRALIA HOUSE.

It seems fitting that Australia House should have been opened by His Majesty the King in what we all hope may prove the last year of the great war, for while no one of the Dominions can be described as having shown greater loyalty than another, it would be impossible to add to the glory which Australia has won by the bravery and devotion of her sons. It is fitting, too, that the offices of the great Dominion should occupy a central position between the City of London and the newer London which lies beyond Charing Cross. There, in one of the main thoroughfares of the greatest city of the Empire, we



THE VESTIBULE.

hope it will stand for centuries to remind generations of Englishmen of what the Greater Britain beyond the seas has done for the great cause of justice and loyalty.

The building, of which we give a number of illustrations, reflects the greatest credit on the architects, Messrs. Marshall Mackenzie and A. G. R. Mackenzie. Though it is difficult and misleading to label any work of modern architecture with the name of a traditional style, it may be best described as being based on the French Renaissance of the epoch of Louis XIV. But in saying this we only wish to convey the idea of the nearest equivalent to what is, in fact, an excellent example of modern Renaissance design well conceived for the purposes for which it was designed.

The plan is an admirable one, simple and direct, but giving scope for some fine features which have the merit like all work of the best planners of fully satisfying practical requirements. Nothing could be more effective than the vestibule and entrance hall by which the exhibition hall, which forms the chief feature of the ground floor, is approached, and the semi-elliptical staircases which flank the central approach on either side are admirable both from a practical and æsthetic standpoint.

The general scheme of design is dignified and effective without being lavish or luxurious—a fault which detracts from the merit of some of the best work of the day. On the first floor the reading room and library and High Commissioner's room are well disposed at opposite ends of the hall way along the axis of the building, while the basement contains a large lecture hall and other rooms for public purposes. The remainder of the block including the space fronting north, south and west affords accommodation for the Commonwwealth Bank of Australia, the Orient Steamship Company, the Claims Department of the Inland Revenue Department, and a number of other tenants, in addition to accommodation for the various departments connected with the Australian Government services.

Not the least interesting feature of the scheme is the happy amalgamation of the Victoria Government offices in the block, effected by the demolition of the gables and a few minor changes. It may be held to be a symbol of the small sacrifices of individuality which are necessary if great amalgamations are to be brought into being—like the federation of Australia itself.

The least satisfactory features of the great scheme are the sculptured groups to either side of the great doorway, which are the work of Mr. Harold Parker, and represent the Awakening and Prosperity of Australia. These appear to us to be out of scale with the building and out of character with its refinements. We hope that the surmounting bronze group which will be the work of Mr. Bertram Mackennal will be happier in its conception.

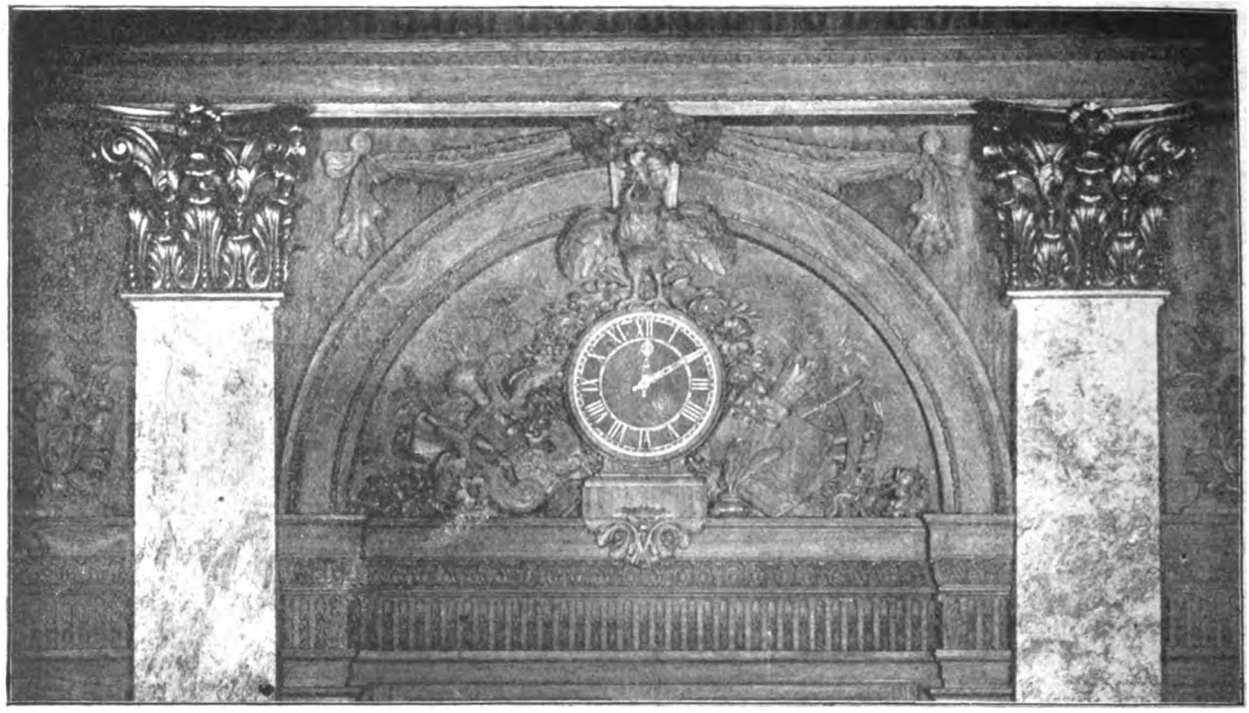
Australian woods and marbles have been employed exclusively in the new buildings and serve to give an idea of the resources of the Southern Continent in building materials.

The cost of the site, including the freehold of the site of the Victorian Government Building, amounted to £379,756, and the estimated cost of imported materials and of contracts amounted in January 1917 to £450,000.

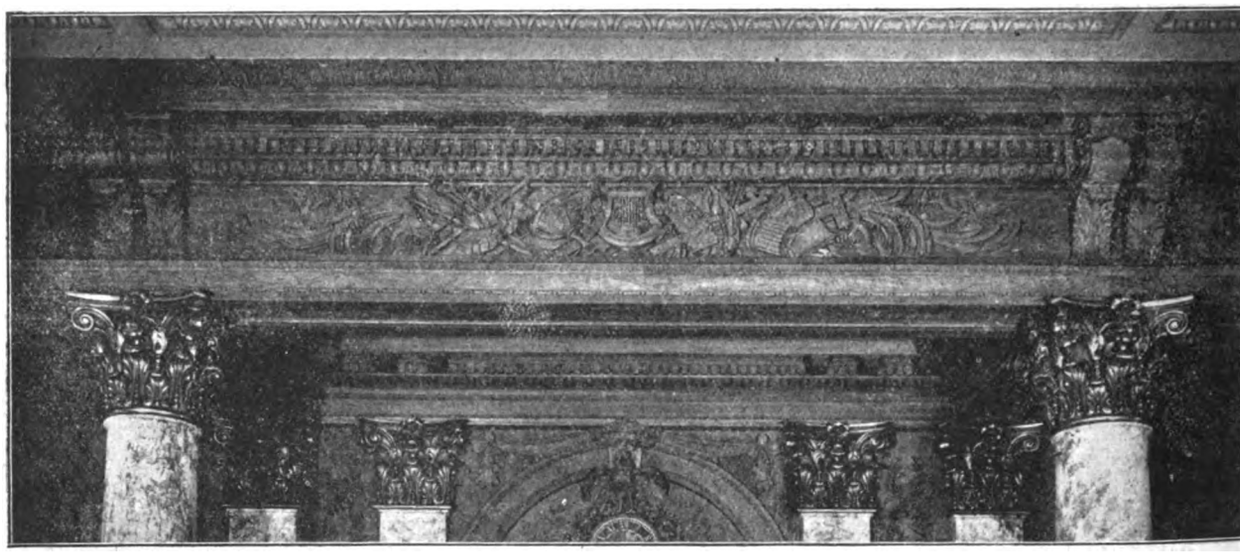
The general contractors were Messrs. Dove Bros., of Islington. Messrs. H. T. Jenkins & Son, of Torquay, carried out the marble work of the exhibition hall, Messrs. Farmer & Brindley the staircases, and Messrs. Whitehead the marble corridors on first floor. Messrs. Wylie & Lochhead, of Glasgow, carried out the woodwork of the library and reading room. Among other contractors were Messrs. Holloway Bros. for foundations, heating by Messrs. R. Crittall & Co., steelwork Messrs. Redpath, Brown & Co., electrical work Messrs. Higgins & Griffiths, plaster work Messrs. Annan, and lifts by Messrs. Waygood-Otis & Co., and Messrs. Chubb. It says much for the contractors and subcontractors in the difficulties of the time that so admirable a result has been achieved.

Mr. William Stark has acted as clerk of the works, an office at the present time carrying with it exceptional difficulties and responsibilities.

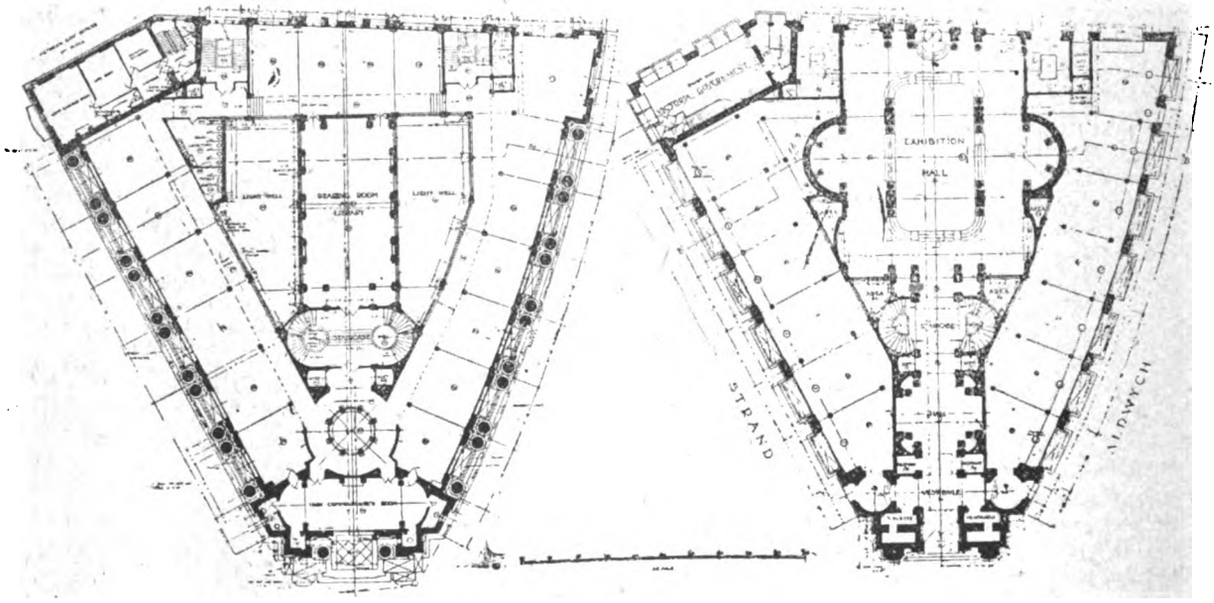
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AUSTRALIA HOUSE.—THE LIBRARY. DETAIL WOODWORK AND ENTRANCE DOOR.



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AUSTRALIA HOUSE.—PLANS

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SOME BELGIAN TOWN HALLS.—II.

By John A. Randolph.

The Tournai example is simple, with central pediment and pavilions at the ends, but at the rear are the mediæval remains of the cloister of the old St. Martin's Abbey, of which the civil building is a portion. This cloister fragment is the only Gothic remnant of the fabric.

Braine-le-Comte is illustrated to show a different type of structure, and before restoration the bell-turret was non-existent, and possibly the latter-day architect may have taken his cue for it from the handsome one at Renaix, which edifice, however, though later and devoid of traceried parapet, but has shallow surface decoration instead, seems to a certain extent based on the Braine-le-Comte one as to its ensemble. In the restoration the tracery has given place to pediments over each window. Mons town hall, whose clumsy turret has a curious clock, is somewhat of the type to be found in that of Audenaerde and Ghent, though not so elaborate, and smaller, and is slightly reminiscent of the one at Brussels as regards the main building; it dates from 1458 to 1467. The ape that used to be an inn sign is attached to the staircase, and is regarded as one of the town's emblems, like the bear at the Poorter's Logie at Bruges is for that city.



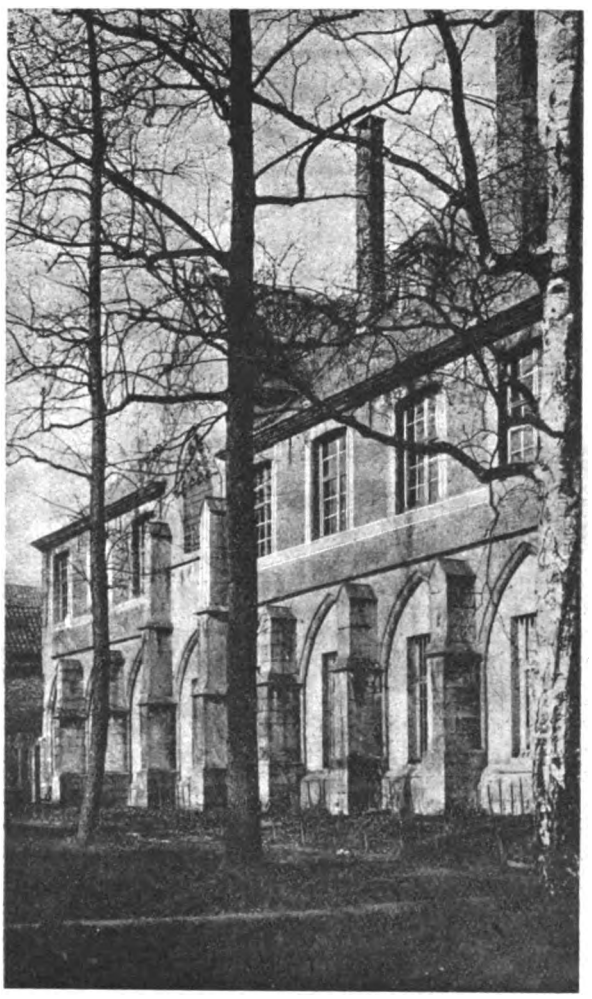
NINOVE, FROM AN OLD PAINTING.

At Damme, near Bruges, the town hall is a detached high edifice, of which the ground floor is approached by a beautiful canopied porch and bold flight of steps. The fine roof runs lengthwise with the building, which is terminated at each end by stepped gables and graceful corner turrets. There is a beautiful mediæval chimney-piece in the big room, with magnificent fire-dogs and roasting implements, and the ceiling is beamed, with curious stone brackets in support, the grotesque one especially, of the man with the homely pig, causing much amusement.

Those of Aerschot, Thielt, Hasselt, and Huy are very much of a type—square, some plaster-fronted, one with pediment—but Thielt's is gabled; those of Huy and Hasselt having the high roof sloping back from the front cornice towards a curiously placed little turret that is not unlike a large and ornate ventilator. The Thielt one stands near the belfry in the corner of the Grand' Place, at the entrance to a narrow outlet from the town into the country beyond, and is fairly richly ornamented, and of bold proportions. We illustrate those of Huy, Hasselt, and Thielt.

That of Namur is Renaissance, and poor—if it has survived the German bombardment of the town—while the Liège one is of the first quarter of the eighteenth century, and the one at Diest is a long two-storeyed classical building, very patchy in effect owing to broad upright courses of stone and brick alternating and the wide stone dressings round the double row of long wide windows. It is unsatisfactorily situated low down in a corner near the great church, and spoils the picturesqueness of the Square there. It is, too, at the entrance to a narrow street leading to the canal quai, and, indirectly, to the ramparts and station.

St. Ghislain, near Mons, has as its main feature a central tower, well proportioned but low, with domed roof surmounted by a quaint ventilator-type finish. A couple of arches on tall columns with classical capitals support the two floors, and have an arch on either side. The hipped roofs of the corps-de-bâtiment on both sides of the tower and the louvres in them are in keeping with the central feature, and the whole structure, standing at the corner of the large Square close to the curious little parish church, is a very happy little composition. The houses beyond, abutting on it on the other side, are of about the same period, with hipped roofs and dormer windows. The ground floor on either side of the arches is sublet to shops and the ubiquitous café.



TOURNAI, CLOISTER OF ST. MARTIN'S ABBEY. PART OF TOWN HALL.

Stavelot town hall is also a classical one, with pedimented centre feature, rather rich in decoration. It was part of the Abbey.

An interesting obituary notice of the late Frederic Richard Farrow, F.R.I.B.A., Editor of this Journal, appears in the July issue of the Royal Institute of British Architects' Journal of Proceedings, written by Mr. Percy L. Marks.

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NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS.

SUMMER MEETING AT BIRMINGHAM.

The Summer half-yearly general meeting of the National Federation of Building Trades Employers of Great Britain and Ireland was held on Wednesday, July 31, at the Grand Hotel, Birmingham. Mr. H. Willcock, the President, was in the chair, and there was a large and representative gathering of delegates.

Prior to the ordinary business of the meeting being proceeded with, the Lord Mayor of Birmingham, Alderman Sir David Brooks, extended a civic welcome to the Conference, and in the course of his remarks he referred to the Government housing programme, expressing the hope that it would be left in the hands of private enterprise to carry out rather than being handed over to the municipalities. He also congratulated the building industry upon the Conciliation Boards and the Industrial Parliament which it had set up, and remarked that there was no reason why operatives and employers should not work together in harmony for the common good.

On the proposition of the President, seconded by Mr. G. Elvins, President of the Midland Centre, a cordial vote of thanks was passed to the Lord Mayor for his welcome.

Mr. G. A. White, the Secretary, submitted the eightieth half-yearly report of the Council, which dealt with a variety of topics, including Boards of Conciliation, the suggested form of contract, housing, the Federation trade mark, claims for reimbursement, the Industrial Parliament for the Building Trades, the 12½ per cent. awards to the engineering trades of the Committee on Production, the Courts Emergency Powers Act, reconstruction problems, Rent Restrictions Act, and exemption from military service.

The report was adopted.

A "V.C." Member.

On the suggestion of the Secretary it was agreed that he should write a congratulatory letter to Lieut.-Commander P. T. Dean, a member of the Blackburn Association, who had been awarded the V.C. for gallantry displayed by him in connection with the recent attack on Zeebrugge.

Builders and Air-Craft Work.

Mr. R. B. Chessum (London) moved that a paragraph, to be prepared by the President, be inserted in the report dealing with the subject of air-craft manufacture. He said that in London they had been brought very closely in contact with the matter. The London Association had been sitting on the London Joint Standing Committee, which was a child of the Engineers' Employees Federation, the object of such membership being to watch the interests of the building industry in regard to any decisions come to by the Federation. Last October the woodworkers approached them to arrange a code of rules for the air-craft industry, but the operatives refused to meet the Standing Joint Committee because it was not a Federation. It was at that juncture that the London Association decided to get recognised by the Government as being the Association in London dealing with matters in connection with the air-craft industry. Having done that they felt there was no necessity to remain on the Joint Standing Committee, but they were pressed by the engineers not to leave and create anything like a split. His point was that the matter ought not to be looked at from the point of view of those engaged in air-craft manufacture only. For himself, at the moment he was largely engaged in such manufacture, but he was a builder, and he was concerned with the future of the building industry. It must be remembered that the joinery trade was an essential part of the building industry, and he thought that the Federation ought to consider the advisability of obtaining representation on these Standing Joint Committees.

Mr. Hill (London), in seconding the proposition, pointed out that any decision of the Committees which were dealing at the moment with air-craft workers might react very seriously on the woodworkers generally employed by builders.

The proposal was agreed to, and on the motion of Mr. S. Eastern (Newcastle-on-Tyne), seconded by Mr. R. Costain (Liverpool), the following resolution on the same subject was also carried: "That in the opinion of this meeting the rates of wages and conditions prevailing for employees in the woodworking branch of the air-craft industry should be the same as for that class of men in the building trades." The question of the desirability of the Federation seeking representation on the Joint Standing Committees was referred to the Administrative Committee with power to act.

Form of Contract.

The Secretary reported that at a special meeting of the Council held on the previous Monday they had considered the report of the Committee *re* form of contract, together with a draft form. This was approved subject to certain amendments settled at the time and to certain points being referred back again to the Committee for further consideration. The Council was thereupon re-appointed, and when it had completed its work the form would be submitted to the Federation for criticism, to be finally approved at a special Council meeting.

The report was adopted on the motion of the President, seconded by Mr. Eastern.

The Housing Programme.

A lengthy report was next submitted by the Housing Committee, which was re-appointed at the annual meeting last January with additional members, to reconsider the report then submitted which was not acceptable to the meeting. After drawing attention to a number of facts and statistics put before them in regard to rating and the number of houses erected in the country, by Mr. Watkin Williams, the Committee reported that they had noted and considered the progressive decline in the house-building industry during the years preceding the war, and recommended as follows:—(1) The repeal of the Finance Act (1909-10) (Part I.) to restore confidence in building as an investment. (2) The amendment of the Rent and Mortgage Act, 1915, so as to enable the owners of property to increase the rent to cover the increased cost of repairs and the general increase in the rate of interest. (3) The abolition of the present system of rates covering local (and national) expenditure—as these are levied on one kind of property only—and the substitution therefor of some method of local income tax to cover local expenditure, all national charges being borne from the national income. (4) The basis of such local taxation to be widened so as to reach the many persons, not "occupiers of property," who now escape contributing to local expenditure for amenities they enjoy. (5) That some method be devised by which the amount of rates included in any payment of rent shall be shown separately in whatever receipt be given. (6) The present method of transfer of land to be reconsidered and simplified so as to facilitate and cheapen the cose of conveyance. (7) That public authorities should let work by competitive tenders only. (8) The by-laws for building erection to be examined and re-arranged so that, without sacrificing efficiency, the execution of housing work may be made less costly; public authorities not to be allowed to relax them for their own purposes, while compelling strict observance thereof by other persons, and that local by-laws should be subject to periodical revision. (9) The methods of construction in respect of roads and sewers in connection with housing schemes to be reconsidered with a view of adapting them to the traffic they have to carry. (10) That the Government be urged in the national interest to find some equitable scheme by which suitable houses built by private enterprise or public utility societies may receive a subsidy to cover the excess cost occasioned by the war. The Committee also considered the present system of rates on buildings and its detrimental effect on building operations generally, and particularly its effect on small house property, and it commended to the general meeting the

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following resolution which it had approved:—"The National Federation of Building Trades Employers of Great Britain and Ireland views with grave concern the gradual decline of its trade during the years preceding the war, and the relation of this decline to the present shortage of houses, and is of opinion that the existing system of rates levied on buildings and similar hereditaments to meet charges including both local and national expenditure is in great measure the cause of the decline in its trade, and is consequently the chief cause of the present housing problem: and that it recommends to the Government the abolition of the present system and the transfer from local to Imperial taxation of all public expenditure which is national in character, such as Education, Poor Rate, Mental Hospitals, Police, and County Roads, &c., as has already been recommended by several Royal Commissions of Inquiry."

The Secretary reported that the report had been considered by the Council. After making certain amendments it was referred back to the Committee with instructions to consider it further and to report to a special Council meeting. They also passed a resolution recommending the local associations to appoint a Housing Committee to discuss the question with their respective local authorities.

The President proposed that the action of the Council be confirmed.

Mr. G. T. Snape (Birkenhead) seconded.

Several members expressed the opinion that there was no necessity to delay adopting the report, and after some discussion it was agreed to on the motion of Mr. Costain, seconded by Mr. Johnstone, with the deletion of the following words, "as they are levied on one kind of property only" in par. (3), and the words "or public utility societies" in par. (10).

The following resolution on the same subject from the Midland Federation was adopted, on the motion of Mr. F. Doleman (Nottingham):—"That, in consideration of the promise made of Government support for housing schemes, the National Federation be asked to approach the Local Government Board and request them to arrange facilities to be granted to private enterprise in the erection of the houses for working classes now under consideration, and that it is desirable that the National Federation should prepare a scheme outlining how such assistance can be given."

Accident Insurance Premiums.

The London Association called attention to the excessive premiums being charged by accident insurance companies in consequence of the rise in wages, and a recommendation of the Council that the Regional Federations be circularised suggesting that they should take up the question and approach the companies with a view to obtaining a reduction of premiums was agreed to.

Builders as Revenue Collectors.

The Secretary reported that, acting on a request from London, the Council had agreed to the following recommendation on the subject of the large amount of free clerical work which builders were required to carry out for the Inland Revenue Authorities:—"That a request be sent to the Regional Federations to apply to the Inland Revenue calling attention to the enormous amount of clerical work carried out for them, and to inquire what scale of payment the Department is prepared to make to cover the net cost of such clerical work of assisting them in collecting this revenue, and that the National Federation make similar representations. It further recommends that local branches should communicate with local Chambers of Commerce with a view of inducing them to make representations on similar lines."

Mr. G. Snape (Birkenhead) proposed that the recommendation be rejected.

This was seconded by Mr. W. C. Bolt (Hereford) and carried.

Building after the War.

The following resolution from the Southern Counties Federation was referred to the Administrative Committee:—"That in the opinion of this Federation, owing to the arrears of work in the building trade, together with immediate industrial needs after the war, it is essential that Government Departments and public bodies throughout the United Kingdom should, for a suitable period after the war, refrain from commencing any large building or constructional work (unless of very urgent national importance) until the public repair work (such as roads and railways) and private work which has accumulated during the period of the war has been completed or overtaken; and that the National Federation be requested, either by petition or deputation to the Premier, to impress the importance of this matter upon the Government. It is also suggested that all the associations throughout the country should approach their Members of Parliament with the same object."

Men for Military Service.

The Council reported having had before it a report of the deputation which waited upon the National Service Department on July 5 on the subject of military service and the proposed new list of certified occupations. As the result of the interview was somewhat indefinite they had sent a telegram to the Department asking for something more definite, which had elicited the following reply:—"Your telegram yesterday received. Instructions have gone out to all regions that under certain conditions men of new military age in building trades are not to be called up for military service. New list will be out in August."

Considerable discussion ensued, several members expressing themselves strongly at the delay which was being shown in getting the new list of certified occupations, and eventually the following resolution on the subject was agreed to:—"That this meeting acknowledges the courtesy of the National Service Department in its telegram of yesterday, but expresses its regret with the serious delay in the issue of the certified occupations list, and asks for the immediate issue of an advance copy of the list in relation to the building trade promised to the deputation on July 5, with the ages therein as then tentatively suggested."

Further resolutions on the subject were agreed to, deputing the Special Committee to approach the Protected Occupations Committee of the Ministry of National Service as to the protection of men engaged in the building trade, and suggesting that the whole question of military service be brought before the Industrial Council at its meeting to be held the following day.

Pre-War Contracts.

The Secretary submitted the report of the Pre-War Contracts Committee. The Committee put forward a series of recommendations including the following:—(*a*) The country should be divided into nine centres, in each of which there should be appointed a Regional Committee, composed of representative men of commerce, including a good proportion of representatives from the National Federation of Building Trades Employers and two or three representative operatives. (*b*) These centres should be formed on similar lines to those comprising the National Federation. We have not dealt with Scotland in these recommendations as it will probably have its own proposals to put forward. (*c*) The existing Building Materials Supply Committee of the Ministry of Reconstruction should be strengthened by the addition of two members from each of the Regional Committees to form Central Committees, and the Regional Committee should obtain all possible information with regard to (1) the amount of building work waiting for hostilities to cease; (2) the class of such work, whether small or large, and the description thereof; (3) the approximate quantities of suitable materials immediately available, and the productive capacity of the region; (4) the possibilities of the region being able to obtain suitable output of materials, and whether such works as brickyards, cement works, or similar productive manufactories are in a position to reopen immediately or at the declaration of peace, with or without financial assistance; (5) the class of labour that will first be required in order that priority may be claimed

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for the release of such labour from the Forces; and (6) the number of men (if any) that should be released at once, and whether these should only be "pivotal" men. (*e*) Such particulars when collected should be forwarded to the Central Committee, who should meanwhile prepare a list of various grades of work showing their relative importance in order to instruct the Regional Committees as to the order in which licences must be granted to them. Such grades might be (1) work of national importance; (2) repairs and maintenance; (3) work required for production; (4) transport work; (5) necessary housing accommodation; (6) retail business premises; and (7) private residences, &c. Special consideration should be given to works commenced prior to and during the war, and which come under the foregoing heads, as in those cases a large amount of unproductive capital is locked up. (*f*) Upon receipt of particulars specified in par. 6 (*d*) from the Regional Committee, the Central Committee should decide as to the quantities of available materials that could be allotted each centre. The Regional Committees shall from time to time grant and review licences for building work in accordance with the order of importance as determined under clause 6 (*e*), and sufficient only to use up the available materials, bearing in mind the amount of material likely to be required for repair and maintenance work for which no licence will be required. (*g*) One or more individuals with expert knowledge should be appointed to act as liaison officers to visit each centre, in order to assist the Regional Committees with advice, and to carry first-hand independent information to the Central Committee from time to time. (*h*) The Regional Committees should have powers delegated to them for a definite period of, say, six months, to be extended if necessary. Special powers to be conferred for dealing with emergency work. (*i*) Licences should not be required for works of repair and manufacture of a value up to five per cent. in any one year of the structural value of any building, provided always that such work should not exceed in value £1,000. In all other cases licences should be required. (*j*) To prevent a possible disturbance of the labour market such as has taken place during the war, the scheme for the better adjustment of labour conditions prepared by the National Board in collaboration with Sir George Askwith about to be put into operation, should be made obligatory upon everyone who obtains a licence as one of the conditions attached to such licence. Under this scheme demands for general advances of wages are dealt with every four months by the Committee on Production, and provision is made for securing the due observance of the recognised working conditions in the various districts. (5) Control of prices. The prevention of profiteering is a very important one, but also a very delicate subject. It must be remembered that one of the first objects of any scheme for commercial reconstruction is to increase output, and the manufacturers must therefore be shown that it is to their interest to increase their output. (6) The excess profits tax has tended to encourage profiteering and at the same time to retard development. The manufacturer has felt that there is little advantage in increasing his turnover, as although this would presumably show him an extra profit on his capital, he would actually have to pay over the greater proportion of such extra return to the Government. (7) It is quite clear that any fixing of fair prices will be almost impossible, as the conditions after the war will be rapidly changing and the prices would require constant revision. Moreover the cost of production will vary enormously in different works, and a fixed price which would show one manufacturer a good return on his capital would mean ruination to another. (8) We recommend therefore that, in place of fixing maximum prices for materials, a maximum net profit on turnover should be fixed for each trade. Any profit made by a manufacturer beyond his fixed percentage on turnover to be handed over to the State in place of the present unfair excess profits tax. (9) In limiting the profit by its relation to turnover instead of capital, profiteering is entirely eliminated, but at the same time the manufacturer is encouraged to increase his turnover (*i.e.*, his output) by being allowed to make a profit on all the work he does. It is suggested that the maximum net profit on turnover be limited, and the percentage varied for different trades. (10) Financial assistance. We are of opinion that in many industries connected with the building trade, particularly in the building brick trade, financial assistance will be necessary to a certain extent to enable the manufacturer to overhaul and repair his plant and re-open his works and renew his stocks. Such assistance should be afforded by the Treasury upon favourable terms upon the advice of the Regional and, or, Central Committee. (11) We presume that the subject of reconstruction applies only to this country, and that the Central Committee will take the necessary steps to prevent materials which are of vital importance to this country being sent abroad. This restriction would be particularly important in connection with the release of "pivotal" men or the granting of a subsidy. (12) Finally, we consider that the building trade of this country is so highly organised, both as regards employers and labour, that it will be able to re-establish itself after the declaration of peace with the minimum of delay, provided it is no longer hampered by unnecessary Government restrictions.

The President explained that the report had been adopted by the Executive Council and he now proposed its adoption by the Federation.

The resolution was agreed to.

After the transaction of formal business the meeting terminated with a vote of thanks to the President.

BRITISH ARCHÆOLOGICAL ASSOCIATION.

(*Continued from last week.*)

Mr. Johnston then conducted the party to the Chapter House and explained with much detail its historical and architectural features. Canon Westlake then led the way to the Chapter Library, where he exhibited the rare thirteenth century Bestiary, which had been the subject of a lecture recently delivered by him before the Association. He conducted the party up toilsome steps to the Muniment Room, which had been the record office of the Abbey since the time of Richard II. Canon Westlake pointed out his badge, a white hart gored, and the star decoration on the partition and on the presses, and disputed the derivation of the "Star Chamber" from such decoration, preferring the derivation from the Hebrew word "Sh'tar," a bond, and the chamber as a bond-room where the legal documents relating to the Jews were kept. Here are stored the largest of the Abbey chests, 12ft. in length, and two small trunks that belonged to Lady Margaret Beaufort. The cupboards were as old as 1200. During the Commonwealth Colonel Humphrey, the regicide, occupied this room. It contains 50,000 documents dating from the time of St. Dunstan to the present day, and an indexed description has been made by the Abbey authorities. A very interesting survey was made along the triforium gallery, whence splendid views were seen of the church and of the sculptures, placed too high to be well seen from below. Here is preserved a cope chest, of which there are no examples out of England. Others may be seen at York, Salisbury, Wells, and a few other places.

In the evening the members dined together at the Holborn Restaurant under the chairmanship of the President, Mr. C. E. Keyser, when certain business of the Association was transacted, officers elected, speeches delivered, and votes of thanks passed to all who had contributed to the success of the Congress.

Croydon and its Neighbourhood.

On Friday, July 19, the Association visited Croydon, and the first building inspected was Whitgift Hospital, which was described by Mr. Johnston in the quaint little chapel of that institution. He said that John Whitgift, Archbishop of Canterbury in the time of Queen Elizabeth, was the founder, and that Surrey might be proud of its post-Reformation hospitals, such as this one and

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Abbot's Hospital at Guildford. There were certain common ideas both in their foundation and their buildings. They were built mainly of brick and flint. There were, of course, many pre-Reformation hospitals erected in the twelfth century onwards. Canterbury had its Hospital of St. Thomas à Becket, and in most towns there were similar institutions. The Reformation did not destroy the pious tradition. John Whitgift was a man of good parts, of a lovable though three-cornered nature, somewhat narrow, and a strong opponent of the Puritan faction. He dedicated his hospital to the Holy Trinity, and it was built between the years 1596-9. Queen Elizabeth took an interest in his work. She was fond of him, and in the playfulness of monarchs called him her "little black husband." The founder's name is writ large on the hospital he built. The institution has been threatened. Croydon is a growing and prosperous town, and has not always shown an interest in its historic buildings. Old houses have disappeared. Its spirit is modern, and when the road adjoining the hospital wanted widening, many of its inhabitants wished to pull down this ancient and historic building rather than a modern public house on the other side of the road. This is the sordid materialism against which we have to fight and to set our face against. They could not urge any misuse of the charity; there was no fault that could be found with it. It was only a question of road-widening.

The little chapel in which the company was assembled showed that the old Gothic spirit had survived and could be seen in the east window, which was in some way an imitation of the Perpendicular style. The backless benches were charmingly quaint—with their tall standards. The portrait of the founder hung on the west wall, showing a man of dark complexion and dark hair, with his watch and pen and book. The walls were of brick plastered over, and there was a portrait of a lady of the date 1660, supposed to have been Whitgift's daughter. The east window was given by the chaplain and cost £13, and the bell by the servants. In the Warden's house we noticed the cross beams and the Tudor fireplace. Around the quadrangle there is a dado of flint extending almost 4 ft. high to meet the string course. Certain modern innovations were pointed out, the double gable of the gateway, the restored chimneys, the cresting of the roof, and the little porches over the doorways, which were not quite happy. The old kitchen was visited with its large fireplace, and in an outhouse we found the original reading desk and communion table combined, which certainly should be restored to the chapel.

In the Warden's room there are many treasures. It is a chamber of good proportions, panelled, and has a fine coat-of-arms over the fireplace, and Tudor roses. There are many deeds with their seals, and a Bible presented by Queen Elizabeth to the hospital. It is a Treakle Bible, taking its name from the passage in Jeremiah where the word "balsam" ("Is there no balsam in Gilead?") is rendered "treakle." The sixteenth century treasure chest with a coeval key was much admired.

Some of the party were permitted to see Whitgift's bedroom. Owing to the hostility of the Puritans he feared assassination; hence he made the door remarkably strong with a double lock; and he required his servants to lock him in every night when he slept there, and to take the key and sleep on the floor at the foot of the steps leading to the apartment.

Before leaving the hospital Mr. Oke proposed that a letter be written to the Mayor of Croydon congratulating him on the preservation of the hospital, and expressing the hope that its future might be for ever secured.

The Archbishop's Palace.

The pilgrims then wended their way to the archiepiscopal palace by the Wandle River. Archbishop Herring, in 1754, wrote, "I love this old house, and am desirous of amusing myself, if I can find means to do it, with the history of its building." From the time of Lanfranc, Archbishop in the Conqueror's time, to the eighteenth century Croydon Palace has been one of the chief homes of the Primates of England. Again Mr. Johnston acted as guide. It ceased to be used by the Archbishops in 1758, and has had various vicissitudes. It was once used as a dye house, and was threatened with destruction when the Duke of Newcastle bought the premises and devoted them to the foundation of a girls' school under the charge of the Sisters of the Church, who carry on this good work in the old buildings.

In the chapel of the palace Mr. Johnston remarked that it was a perfect embodiment of the domestic chapel of a country house. Great historical interest was attached to it. Lanfranc was the original builder, but the house was rebuilt by Archbishop Langton and much thirteenth century work remained. Archbishops Courtney (1381-96) and Arundel (1396-1414) were great builders, and to them is attributed the Guard Room. Stafford (1443-1452) built the Hall, and Bouchier (1454-81) some of the lesser buildings. Warham, in Henry VII.'s reign, was the author of much of the woodwork, including the screen in the chapel and the battlemented cornices. Dr. Hobson had identified the head of the bench ends as likenesses of Henry VII. and Prince Arthur. The stalls had holes for candles, and there were some good poppy heads. There was much restoration in Laud's time, and the arms of Laud and Archbishop Juxon appear. The panelling was inserted by the former. The roof was early sixteenth century, and the windows belong to the same period. The collegiate system of lighting had been adopted, the windows being set high up, above the heads of the singers. The east window had a two-centred arch, and consisted of seven lancets. The walls were thin because the building was a timber-framed structure. In the ante-chamber is a little gallery styled Queen Elizabeth's pew. The correctness of this has been disputed, but the knobs, pilasters, strap-work, and ornamental cresting point to the truth of the tradition. The Laudian communion rails were found elsewhere and brought here.

(To be concluded.)

THE STATE AND WAR DAMAGE.

A Meeting of the Committee on War Damage was held in the Hall of the Brewers' Guild, E.C., on Wednesday week, under the presidency of Sir Stephen Penfold, Mayor of Folkestone. The letters of regret at non-attendance included several from representatives of the Churches. Cardinal Bourne, Archbishop of Westminster, wrote:—

"Owing to my absence from London last year I was unable to take any part in the representations made to the Government on the quesion of war damage. Unfortunately owing to a long-standing engagement, I am not able to be present at the meeting to-morrow. I trust, however, that the renewed representations which will then be made to the Government will meet with complete success."

Mr. Mark H. Judge, Chairman of the committee, read correspondence which has passed between the committee and the Prime Minister and the Chancellor of the Exchequer. In a letter to Mr. Bonar Law, on July 18, he said:—

"On March 26 Mr. Lloyd George expressed his regret that it was then impossible for him to receive the deputation. His Secretary wrote: 'If you will write to him again when the military situation is a little less serious, he will be pleased to consider your request. He fully realises the seriousness of the matter you place before him, but he is sure you will understand his position in the present circumstances.'

"In reply to our renewed application a letter has today been received which says: 'The Prime Minister has asked me to say that he is so overwhelmed with urgent

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matters affecting the prosecution of the war that it is impossible for him to give any attention to the question you raise, and he would be much obliged if you would settle it with the Departments concerned.'

"I now write on behalf of the Committee to ask you, as the head of the Department most concerned in the matter, to be good enough to fix an early date for receiving our deputation.

"I enclose the Report of the Committee, just issued, from which it will be seen that the Committee now represent 842 municipal authorities having a population exceeding 32 millions."

The Chancellor of the Exchequer replied as follows:—

"I have carefully considered your letter of the 18th instant on the subject of the compensation payable in respect of damage done to property from air raids and bombardments. As the Prime Minister has already pointed out, this matter was most carefully considered by the War Cabinet last year, and as a result of their deliberations I was able to announce the decision of the Government in the House of Commons on November 5. The scheme that was then approved represented, in the opinion of the Government, the most satisfactory solution of the question that could be found, and nothing has since happened which would justify any other view. In these circumstances I do not think that a deputation would be of assistance."

The Mayor of Poplar proposed, and the Mayor of Great Yarmouth seconded, the following resolution:—

That we renew our request to the Rt. Hon. A. Bonar Law, M.P., Chancellor of the Exchequer, for an early day to be fixed for receiving our deputation, and that the following statement be submitted:—

The Committee on War Damage contend that all citizens injured in person or estate by air raids or bombardment should be entitled to compensation from national funds. The Prime Minister expressed full agreement with this when he received the committee on July 13, 1917, but, as yet, the principle has only been given effect to in a very limited degree. The concessions made since the Committee have been formed are:—1. A reduction of 50 per cent. on the premiums for insurance. 2. Compensation by way of grace for personal injury in certain cases, and 3. Since the interview with the Prime Minister, compensation for damage to property in certain cases, up to £500, but only for damage subsequent to August, 1917, that is after three years of the war.

The Government having taken no further steps towards giving effect to the promise made by the Prime Minister, the following suggestions might be accepted as an equitable basis of settlement.

Outline of a scheme to give effect to the principle of national responsibility for compensation in all cases of damage to person or estate from air raids or bombardment.

1. That the Air Raid Compensation Committee be empowered to settle all claims for compensation in respect of damage from aircraft or bombardment not covered by insurance under the Government insurance scheme.

2. That in cases of personal injury, whether resulting in death or disablement, claims shall be submitted to the said committee, which committee shall obtain requisite information thereon, and settle the claims with the least possible delay.

3. That claims for damage or destruction in respect of property not insured under the Government insurance scheme shall be submitted to the said committee, which committee shall obtain a report on the facts of each case, and the owners shall, with the least possible delay, be compensated to an extent not exceeding £500 in respect of damage or destruction by perils coverable by the Government aircraft and bombardment insurance scheme.

4. Owners of property not insured under the Government insurance scheme, where the damage or destruction exceeds £500, shall, in respect of the amount above £500, be compensated by the Government within twelve months after the termination of the war.

5. The foregoing provisions shall be retrospective, and cover all cases of damage or destruction to person or estate, except in those cases where compensation has already been given or provided for.

6. The Government aircraft and bombardment insurance scheme shall be continued so that all who wish to take advantage of it may thus secure immediate compensation as heretofore. Owners of insured property of an aggregate value exceeding £500 shall be compensated up to that amount without payment of premium thereon.

After a long discussion it was unanimously resolved "That the meeting be adjourned and it be referred to the Executive Committee to further consider the whole matter and convene another meeting.

THE TIMBER INDUSTRY.

By Mr. Percy Groom, M.A., D.Sc., F.L.S., Professor of Technology of Woods and Fibres, Imperial College of Science and Technology.

(Continued from last week.)

One method of introducing heat and moisture into a kiln is to supply steam. Drastic steaming at high temperatures permanently weakens wood, even if it be relatively brief. On the other hand, prolonged steaming or "stewing" of wood in a confined space improves the qualities of woods in certain directions, in that it decreases their tendencies to warp and sometimes renders them more decorative by changing their colours; for instance, beech is thus induced to become somewhat mahogany-like in tint and in resistance to warping. This off-shoot of artificial seasoning provides an additional line of inquiry leading to the improvement in the qualities of inferior woods, especially from our tropical Colonies.

The seasoning of wood has yet one more important bearing on the economy of timber: it increases the resistance to decay. Decay or rot, in at least the overwhelming majority of cases, is caused by wood-destroying fungi, which demand for their development a certain amount of water.

The protection of wood from decay is a matter of great national importance. In our shallow and damp coal-mines, where the air is warm and moist, wood-destroying fungi are often so abundant and so active that timber is rendered useless in a few weeks or months. In 1913 the value of the imports of pit-timber into this country was nearly 4½ million sterling. An American investigator calculated that in the United States, if 40 per cent. of the pit-wood were treated with antiseptics, the annual saving in that country would be more than 50 million cubic feet of timber. I have seen a coal-mine in which the untreated pit-props had to be replaced in four to twelve weeks; whereas creosoted props side by side with them had already lasted eight years. The neglect of adequate protection of wood from decay in this country is emphasised by the fact that I can secure no approximate estimates of the loss in pits, in buildings, fences and posts, or ships. The resultant loss must amount to millions of pounds annually, and much of that loss could be economically prevented.

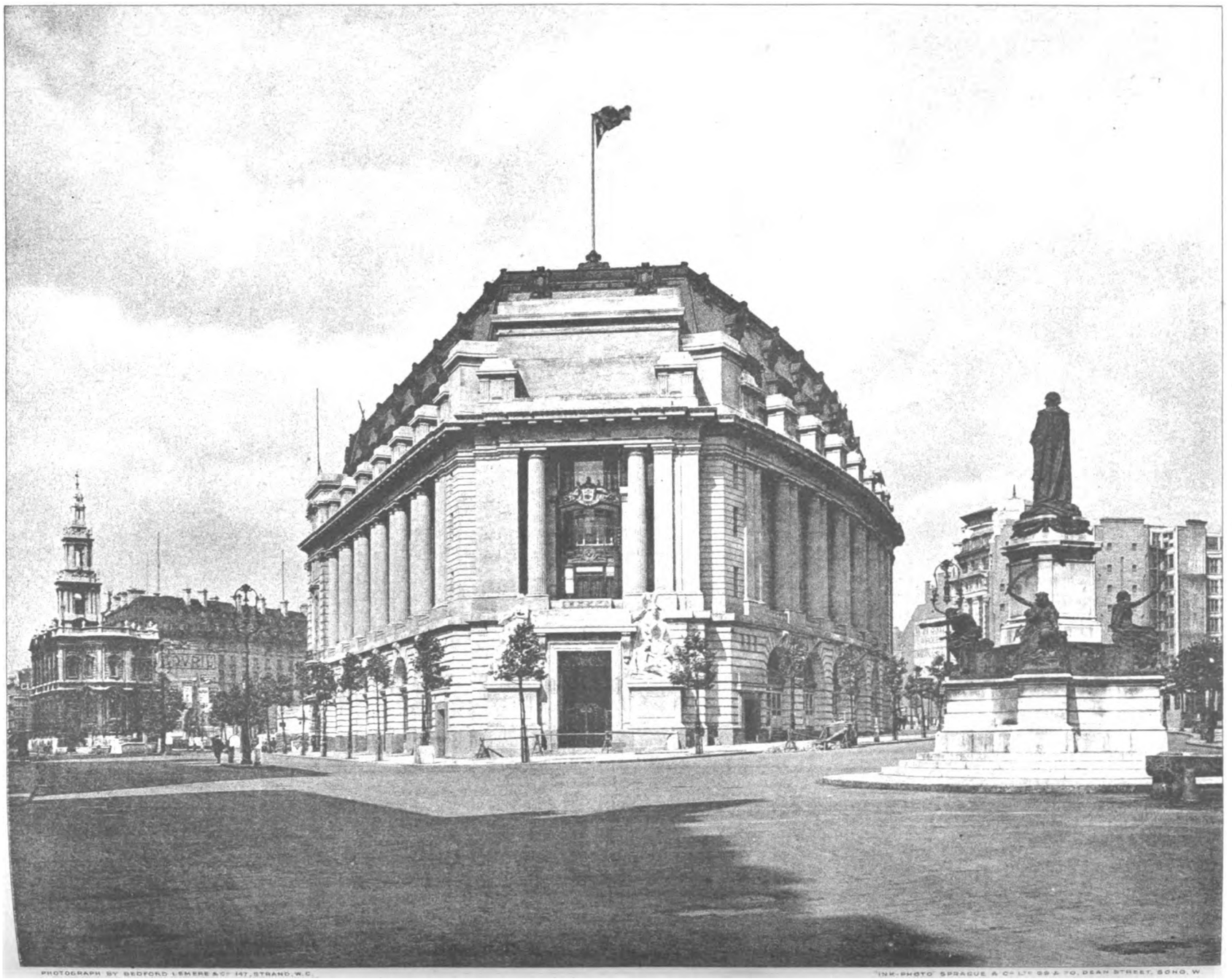
Two methods, namely, sanitation and antisepsis, offer themselves as means of decreasing or preventing the decay of wood.

As in pathological problems generally, and especially in epidemics, sanitation is in the end the cheapest method; but it demands a knowledge of the life-histories and conditions of activity of the organisms doing the damage. A few facts and examples may serve to illustrate the type of research that is urgently called for.

Fungi, which spread by means of their threads or microscopic spores, can be found growing in any house or damp coal-mine. Some of these are practically harmless, others actively destroy wood; it is therefore necessary to identify the fungi present, and to investigate their action in wood. After that the first practical problem in sanitation is to determine the source of the noxious forms, which may come from the forest, timber-

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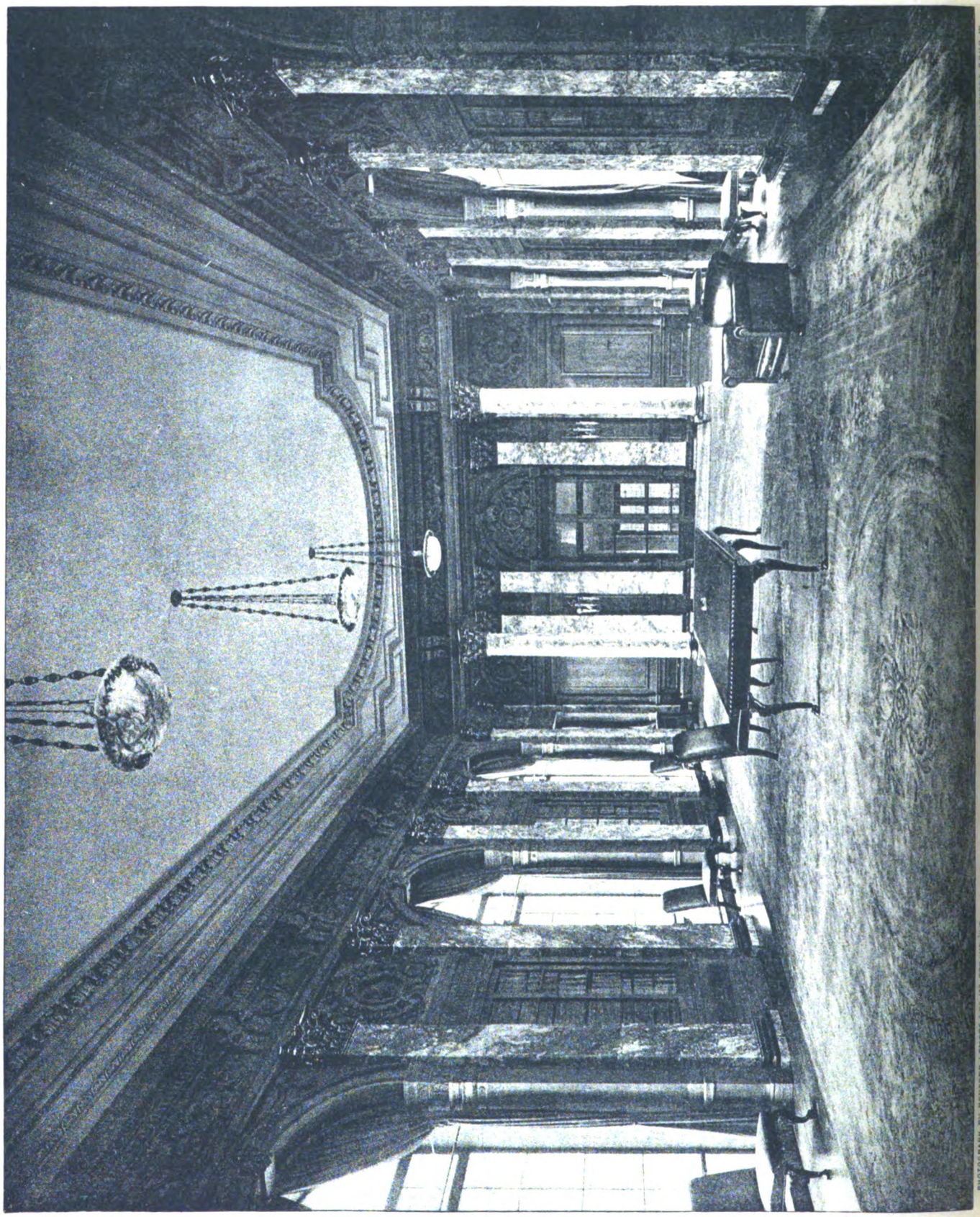
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yards, builders' yards, ships, or coal-mines, or elsewhere. The neglect of the elements of sanitation may be noted in builders' yards, where infected wood removed from houses is stored side by side with fresh timber and sometimes ready for incorporation into a new building. In a very large timber yard in London I have seen the fructification and spawn of the most virulent dry-rot fungus lying almost in contact with immense stacks of softwoods.

The fungi responsible for dry-rot and decay generally vary in their demands for moisture. Some demand quite moist wood, and can readily be exterminated by ventilation and protection of the wood from wet; yet a few species, when once established, can manufacture water and thereby attack the driest wood. Some are readily killed by heat and cannot thrive at relatively high temperatures, others are more resistant to heat.

Again, certain species send their threads into the wood and spread internally at a slow pace, keeping at a distance from the surface. Cases due to this type of fungus are easily dealt with by removing the attacked piece of wood, whereas other species not only penetrate the wood but produce sheets or cords that rapidly swoop over the surface of the wood, grow over and penetrate walls, and so transmit the infection through a complete building or roadway in a coal-pit.

Some species can attack only one kind or class of timbers, so that sanitation may take the form of avoiding the use of these. Other species can destroy woods varying from pine to oak and even teak.

This last consideration brings forward the question of the natural durability of timbers, upon which experiments are essential from the direct practical point of view and because the investigation of the relative immunity of certain species may afford a clue to a cheap and simple method of increasing the durability of woods that normally possess little.

As an accessory to or a substitute for sanitation, timber may be protected by the use of antiseptics such as zinc chloride, creosote and its derivatives, and various other inorganic substances. These differ from one another in their fungicidal efficiency, some being completely effective against all fungi, others being (in practicable concentrations) lethal only to certain kinds of fungi. Moreover, the durability conferred depends upon the depth to which the antiseptic penetrates. Hence the precise process (whether painting or injection under pressure) and the precise fungicide to be used will depend partly upon the length of time that the timber has to last. These will also depend upon the situation of the timber: creosote with its powerful scent and discolouring qualities cannot be used in dwellings; whereas zinc chloride is not eminently suited for superficial coatings out in the open as it readily washes off. The discovery of cheap antiseptics suitable for various situations is a line of research of such fundamental importance as to be worthy of patient chemical and mycological investigation.

Time forbids my entering upon the less familiar but not unimportant question of protecting wood on land against boring insects, and of timber in sea-water (in piles, docks, &c.) against boring marine animals.

Just as the antiseptic treatment of wood renders possible the replacement of valuable durable timbers by cheap perishable ones so likewise does the fireproofing of wood subserve economy by permitting thin pieces of inferior wood to be substituted for thick pieces of more costly wood; specifications demanding that the doors of buildings shall be made of teak of great thickness are therefore extravagant, even though decorative. Investigations have rendered possible the fireproofing of wood to such an extent that even thin three-ply can be made to resist for minutes or hours a temperature of 3000° Fahrenheit. The process of satisfactory fireproofing is, however, not a cheap one, as the cheaper substances used are apt to wash out, to attack metals, and even favour the development of decay-inducing fungi. A problem of vital importance to builders, and even to the Empire, is the discovery of a cheap solution that shall simultaneously protect wood against decay and fire, and shall be suitable for use in dwellings.

(To be concluded.)

TIMBER SUPPLIES AND AFFORESTATION.

Under the auspices of the Royal English Arboricultural Society, a large and influential meeting of landowners, estate agents, and others interested in woods was held at the George Hotel, Winchester, on Saturday, 27th ult. The Earl of Selborne presided.

The Chairman said there was no country in which forestry had been more neglected than it had in the British Isles, but the experience of war had brought home at last, even to the Government, its immense importance. We were dependent before the war on imported timber for an enormous proportion of our annual requirements, not only for all building purposes, but for all the pit-props in our mines, and owners of woodlands found it very difficult to sell their product, however good in quality, for any reasonable price before the war. We had found a great deal more timber in this country than anybody expected existed here, and all that had been found had been of high quality, and wholly suitable for construction purposes and for pit-props. They would remember that before the war the timber trade were constantly telling them that their products were not equal to foreign goods for those purposes. It was not true. They did not believe it to be true at the time, and the experience of the war had shown that it was not true. Although, of course, a great deal of the timber that had been cut had been used green and unseasoned owing to the haste with which its utilisation had been required, yet it had been proved to be of fine quality. It was no exaggeration to say that if it had not been for what the landowners of this country had done in the way of planting in past years, not only without any encouragement from the Government, but in the face of great discouragement of every kind, this country could not have carried on the war. So far as we could see, even if the war should last a year or two more, we should be able to eke out our necessities with the timber supplies of this country, and that would be entirely due to the enterprise, forethought, and natural love of woodlands inherent in our agricultural landowners. His lordship went on to refer to the Report of the Forestry Sub-Committee of the Reconstruction Committee, which is now under the consideration of a Sub-Committee of the War Cabinet, consisting of Earl Curzon and Mr. G. N. Barnes, M.P. His lordship said there were differences of opinion as to the manner in which the report should be accepted, and especially as to the authority which was to be established. The recommendations of the Committee were very definite and were unanimous, but as they involved the displacement of the Development Commissioners on the one hand, and the Boards of Agriculture of Ireland, Scotland, and England on the other, and recommended the establishment of a separate Forest Authority, they would not be surprised to learn that the officials and departments to be displaced were contesting those conclusions, and, while recognising the need for action, desired to have the authority put into their hands. He was one of those who very sincerely hoped they would not have their way, and that we should have for the first time a separate, properly organised, and properly appointed Forest Authority for the whole of the United Kingdom. They would soon learn their fate, but he did not think the matter was settled. He therefore urged them to do all they could to strengthen the hands of the War Cabinet in accepting, without emasculation, the report of the Forestry Sub-Committee. The encouragement of the private landowner in the matter of re-afforestation was also of great importance. We knew what great difficulties would confront us after the war, and unless landowners got help and encouragement they would not be able to do that replanting or effect that extension of

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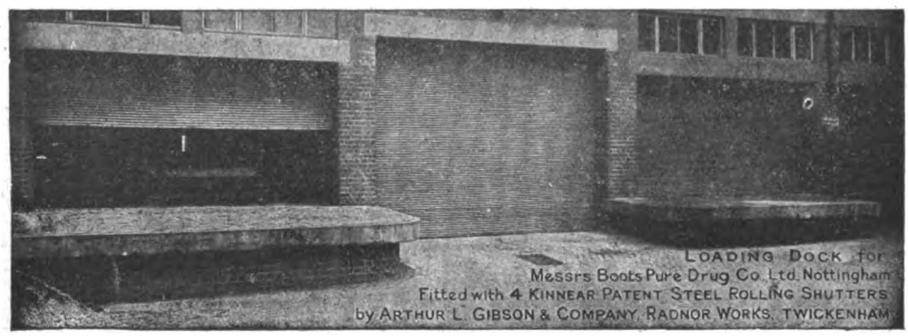
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their plantations which, with a little encouragement, they might be able to do. As to State afforestation, c thought all those who had examined the question agreed that the private landowner by himself could not really meet the needs of the country. If we were caught—which God forbid—in any war of the magnitude of the present one thirty years hence, and there had been no replanting on a sufficient scale, the country would be in a very bad position from the beginning. So far as we could foresee it would be impossible to keep our mines going on imported pit props. Therefore as a mere measure of national safety, apart altogether from the importance of the forestry industry in any civilised country, it had certainly become necessary for the Government to become the owner of forests and the planter of forests, and to establish a Forest Authority which would own millions of acres, land gradually, under a proper and well-thought-out system of rotation, establish forests on the French or some other model.

Mr. M. C. Duchesne, the honorary secretary of the Royal English Arboricultural Society and the English Forestry Association, said he understood that by the end of this year nearly one million acres of woods in this country would have been felled for war purposes. In 1916 and 1917 the amount of home-grown timber felled was over four million tons, and this year it was estimated that six million tons would be required. Those figures were a worthy testimonial to those patriotic landowners who created reserves of native timber without any aid or encouragement by the State to meet a possible national emergency. The forestry interests would give every help to establish forestry on sound lines, and they asked that the subject should not be made a ground for party politics. In view of the fact that 97½ per cent. of the existing woodlands belonged to private owners, it was extremely important that every encouragement should be given to private enterprise. State forestry must be limited to large areas, and would relate principally to waste and hill land far removed from towns, and might involve difficulties as to housing. Ash and other valuable hard woods, also willow and poplar, could be grown on the better valley soils. State forests must be limited principally to land suitable for coniferous timber. There must be a removal of the handicaps from which forestry had suffered in the past, particularly the high cost of transport from the plantation to the consumer; unfair claims for extraordinary traffic on roads when carting timber; unfair assessments for rates and taxes; prejudice of architects, inspectors, and consumers of timber against the native produce; and risk of losses due to insects, fungi, fire, gales, frost, drought, &c. He commented on the indifference of the State and urban interests in the past to the encouragement of forestry. The native supplies of timber which had supplied the wants of the national industries during the war were created in spite of the State and urban interests. The young larch and other plantations which had been felled were created in many instances for sporting purposes and amenities. This was no reflection on the landed interests but it was a very severe reflection on the State and urban voter. The colliery proprietor, the railway official, and the consumer of timber had discouraged forestry in the past, and prevented the proper utilisation of the native produce. The experience of the war had proved beyond doubt that their objections to the native timber were unfounded, which the forestry interests always contended. In face of every discouragement and obstruction in the past the forestry interests had fought unaided the battle for the development of forestry. They monopolised the knowledge relating to forestry, particularly as to the national requirements and markets, and the very peculiar conditions relating to forestry in this country as compared with the Continent.

A resolution was unanimously adopted by the meeting recording its sense of the importance of immediate preparation for afforestation after the war, and that every encouragement should be given to establish forestry; and expressing the hope that the Government will come to an early decision on the Report of the Forestry Sub-Committee of the Reconstruction Committee, and place the future of forestry in the United Kingdom on a proper commercial basis.

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Newcastle Orthopædic Centre.

SIR,—£40,000 must be obtained by September for the part building and equipment of the Newcastle Military Orthopædic Hospital in order to secure a War Office grant of £10,000. The result of the appeal, so far, has brought in cash and promises say £20,000.

I feel sure that in a wealthy district like the city of Newcastle and surrounding counties, it is not too much to hope that the amount will be speedily raised. The total cost of the scheme is estimated at £150,000, and the outlay will effect an extension to the Royal Victoria Infirmary which will be an invaluable asset to the institution in serving the needs of the great industries of the district.

The immediate purpose of relieving and re-constructing the disabled soldier deserves the support of the North of England. I appeal for a generous and prompt response.

Donations may be sent to the Lord Mayor (at the Town Hall), or to the Financial Secretary of the Orthopædic Centre (at the Royal Victoria Infirmary), and will be acknowledged in due course by the hon. treasurer, Mr. J. E. Woods, Barclay's Bank, Ltd., Newcastle.—Yours, &c.,

GEORGE LUNN, Lord Mayor
(Chairman of the Committee).

United States and Bribery.

SIR,—The Federal State Commission has recently submitted a special report on commercial bribery to the Congress of the United States, in consequence of which a Bill was drafted, which has been read twice in the Senate.

The full text of the report and of the Bill ("to further protect interstate and foreign commerce against bribery and other corrupt practices") is given in the current "News-Sheet" of the Bribery and Secret Commissions Prevention League, Incorporated, and I shall be pleased to send a copy of this to anyone interested.

Not only in the United States but also in the United Kingdom there is a steadily growing movement against "graft" and secret commissions of all kinds, shown as regards this country by the fact that nearly 200 new members have joined the League this year.—Yours, &c.,

THE SECRETARY.

9 Queen Street Place,
London, E.C. 4.

THE death of Mr. George Fletcher, architect and surveyor, aged eighty-two, is announced as taking place at his residence, Rose Cottage, Bilton Lane, Harrogate.

REAR-ADMIRAL LIONEL HALSEY, presiding at the annual meeting of the Veterans' Association, stated it was proposed to acquire the Epping Forest Hotel, Chingford, as a convalescent home for the benefit of discharged sailors and soldiers.

THE Chelmsford Town Council have elected a committee consisting of the Mayor, the chairman of the Allotments and Housing Committee, and the chairman of the Finance Committee to select a site for their housing scheme, complaints having been made by the owners of works of the want of accommodation for workmen.

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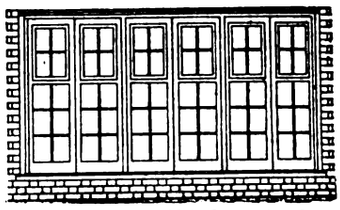
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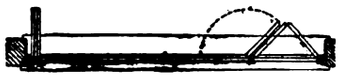
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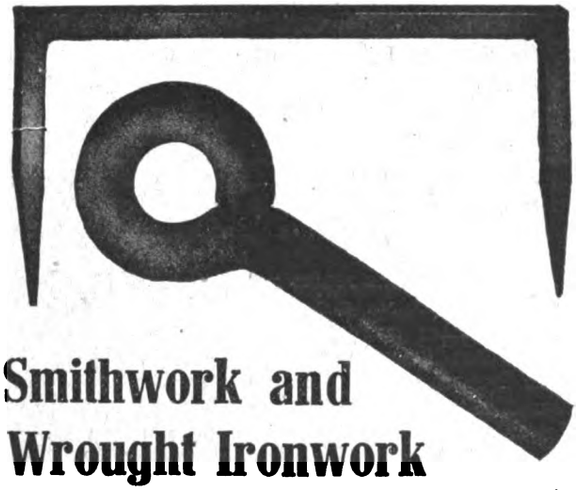

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THE ARCHITECT

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FORTHCOMING EVENTS.

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TRADE AFTER THE WAR.—II.*

In our issue of last week we summarised the depressing record of the pre-war condition of British trade under the *régime* of *laissez faire* and Free Trade, which has been given by the Reports of the Departmental Committees appointed to consider the position of certain trades after the war. We turn now to the very different picture presented by the results of the opposite policy pursued by German traders in alliance with the German Government.

The keynote of the policy pursued by the German Government was organisation inspired by patriotism. German trade was organised with great skill commercially, financially, and politically; and all the units thus organised were inspired with the patriotic ideal of *Deutsche uber Alles*, with the result that the efficiency of this thoroughly organised trade was maintained in all its parts. Let us examine the organisation of German trade from these three points of view—the commercial, the financial, and the political. Of what we may call the commercial organisation of trade we may take as illustrations the management of production and distribution, and the arrangements for the promotion of foreign trade. The Report on the Iron and Steel Trades affords a striking illustration of the manner in which the superior organisation of production and distribution in these trades enabled both Germany and the U.S.A. to surpass the United Kingdom :—

> The possession of large resources of fuel and iron ore made the U.S.A. and Germany formidable competitors in the trade of the world. The American and German iron and steel industries are of relatively recent growth, and have throughout been organised for large scale production, and small installations held and worked by individual owners are comparatively unknown. The individualism of the British character has often led the iron and steel manufacturer to prefer to retain personal control over a small and relatively inefficient works, rather than pool his brains and capital to the greater ultimate advantage of the industry. The United States Steel Corporation alone controls an output of iron and steel greater than the whole production of the United Kingdom. These immense concentrations of capital are the normal form of industrial organisation in America and Germany, but are non-existent in Great Britain.

Hand in hand with the organisation of production went the organisation of distribution. Many associations have been formed among British iron and steel manufacturers, but their aims and interests have been limited to smaller problems of price regulation or relations with labour. No serious effort has been made to form a national selling organisation or so to distribute production as to reduce the cost of production and distribution to a minimum.

The iron and steel manufacturers of Germany and America have developed their industries on an immense scale, aiming at the production of large quantities of uniform articles rather than at variety of output. Large units specially designed for cheap production have been laid down. On the other hand, expansion in the United Kingdom has generally meant the remodelling and extension of existing works.

The organised industries of Germany and America have been able to enter into close relations with railway, shipping, and other transport interests, and have thus obtained favourable treatment as regards freight rates by land and water. Specially low rates were obtained to facilitate export at competitive prices, whereas British manufacturers have been continually obliged to pay rates much in excess of those which obtain in Germany and America for similar services. Moreover, evidence has been given to show that foreign material imported into the United Kingdom has been carried both by land and sea by British transport companies at rates lower than those charged to British manufacturers for similar services.

This led firstly to the system of "dumping," which not only enabled the dumping nation's trade to keep going in bad times, but also helped it to capture foreign markets. Secondly, it led to the formation of international agreements from which the better organised trade of the Germans naturally secured the lion's share of advantage. A very good illustration of this is afforded by the Report on the Engineering Trades :—

> An instance was brought to our notice where, before the war, Germans were trying to arrange for the sale of baths in this country, endeavouring to make a bargain that they should be allowed to charge 5 per cent. less than their English competitors, and should be assigned a growing proportion of the total trade in this particular article until the Germans had been given 50 per cent. of the trade. What was to happen beyond that was to be left to be dealt with thereafter. It was by these methods that the Germans obtained control of the Antwerp coal trade, and when they once had a grip on the trade they obtained the whole of it by creating selling organisations of their own.

The Report on the Engineering Trades shows that this elaborate organisation of production and distribution was admirably adapted to securing foreign trade. It rendered possible the system of working by cartels—a system which was a sort of mutual insurance against bad times.

> Under the system of cartels, which was intended to enable the manufacturer to maintain a proportionate volume of output in bad times, production was regulated, and in cases where an article was exported the manufacturer was entitled to receive a rebate in price from the suppliers of all the raw and semi-manufactured materials which went to make up the completed article. This rebate varied from coal and iron ore to component parts. Each supplier had to contribute under a recognised scale based upon a calculated quantity involved in the tonnage exported. This system takes the place of a general pool. The manufacturer knows that his export trade can be cut as compared to his home trade to the extent of the rebates to which he is entitled. The net effect is that the goods produced for the export trade are produced at an all-round cheaper price than goods produced for the home trade.

The financial organisation was supplied through the German banks. They financed German and other businesses all over the world, and, in return for advances of money, they secured a share in the management of all these various businesses. Sir Herbert Hambling has

* Reports of the Departmental Committees appointed by the Board of Trade to consider the position after the War of the Iron and Steel Trades, the Engineering Trades, the Electrical Trades, and the Textile Trades.

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pointed out that before the war the three great German banks established in this country had extended the sphere of their operations to cover purely British business by a method analogous to the operation of dumping. "By practically working without profit they secured a large portion of British business, which involved the provision of facilities and finance for overseas trade." As he points out, "the British banker and the British trader were acting in a very short-sighted manner in allowing this business to be diverted in this way, because it enabled the German bank to obtain for the benefit of German trade valuable information." Thus the German banks became the great headquarters staff of German industry; and popular opinion showed itself as wise in demanding, as so-called instructed opinion was foolish in resisting, the demand for the closing of these banks. As Bagehot has said in his book on the English Constitution, "A public department is very apt to be dead to what is wanting for a great occasion till the occasion is past. The vague public mind will appreciate some signal duty before the precise occupied administration perceives it." The war has furnished many illustrations of the truth of this aphorism, but none more striking than the struggle to close the German banks.

We have called the German banks the great headquarters staff of German industry; and this is no metaphor. Behind the German banks was the German Government. The banks were the link between the commercial and the political organisation of Germany. They dictated the policy to be pursued; and they supplied a foreign intelligence staff which was as instructed as ours was stupid. The support of German trade was a principal object of German diplomacy, for which any deception was justifiable; and German diplomacy was backed up by Germans all over the world. "It is specially noteworthy," says the Report on the Engineering Trades, "that the German settler seems always loyally to buy German goods." This skilful mobilisation of German patriotism enabled the German rulers to prepare for war under the guise of peaceful commercial penetration. The increasing hold which Germany was getting over the Egyptian cotton industry, the obvious intent "so to cripple the iron and steel industries of this country that Britain would be hopelessly outclassed in a war of material," the manner in which they cornered such key industries as the manufacture of tungsten metal and electrical products—all go to show that this commercial organisation was designed to ensure Germany's victory when the war which was being planned came.

There was much that was admirable in this organisation. What was altogether evil was the intention of warlike aggression which inspired its controllers. Those controllers were a military caste who, we now know, have thrown off all those civilising influences of law and religion through which modern Europe has slowly and painfully attained civilisation, and all those influences derived from the Roman civil law and the canon law on which modern international law is based. They have infected the whole of Germany with their poison, and they have proved conclusively that, as in the days of the Roman Empire, so now, pure Germanism is pure savagery. They have proved that the Germans have all the characteristic vices of savages—their falsity, cruelty, and licentiousness, and that they have their characteristic tastes; for, just as the savage wishes above all things to buy the white man's rifle, so the Germans value the discoveries of science in proportion as they increase their military power.

But, if we would have security for the future, we must learn from our enemy—even from such an enemy as the German. We must reorganise our commerce in such a way that we can never again be caught so unprepared as we were in 1914—in such a way that no other nation can under the guise of peaceful trade ever gain so great a stranglehold on our commerce. With this topic we shall deal in our concluding article.

(To be concluded.)

NOTES AND COMMENTS.

In reply to a number of correspondents, we have the pleasure of calling attention to our announcement on page 44 in our issue of July 26, of the appointment of Mr. Herbert W. Wills, F.R.I.B.A., as editor of this journal. Mr. Wills will take over control of the Editorial Department on September 1 next.

With reference to the publication of Australia House in our last week's issue, the proprietors of "The Builder" have called our attention to the use of the plan block. The plans from Messrs. A. Marshall Mackenzie & Sons not having come to hand in time for the Friday's issue, we frankly admit publishing those which appeared in our contemporary. We have been asked to state this fact, and we very gladly do so, and regret that this should have been the case, particularly as we understand that these plans had been specially prepared.

The Government and the Port of London Authority have entered into an agreement for proceeding immediately with the completion of the extensions at the Albert Docks, which had been suspended in consequence of the war.

Mr. Alexander Mackenzie, architect, in his report on the condition of Spey Bridge, Newtonmore, to the Badenoch District Committee, held at Kingussie, stated that this bridge was built after a somewhat daring and risky plan about the year 1750. The first stone bridge across the Spey was built at Garvamore, at the top of Laggan, higher up the river, in 1735. The Spey bridge at Grantown was erected about the same time, and the three bridges have been the subject of expensive repairs from time to time. The repairs at present recommended to be carried out on the Newtonmore bridge are estimated at £310.

Mr. Rowlands, M.P., raised the question last week "to afford town leaseholders relief either by the extending the period of the existing leases or holding over all repairs until a reasonable time after the conclusion of peace." The Chancellor of the Exchequer, Mr. Bonar Law, promised to consider the difficulties and the possibility of bringing in a Bill after the recess. In such a case great care will have to be taken to determine what is purely decorative as against structural repairs. The neglect of the latter may easily become a serious matter.

Mr. R. C. Tombs, I.S.O., gives an interesting account in the "Bristol Times" for August 8 of several chimney-pieces which have been found in Bristol, and which have considerable archæological interest. Two of these chimney-pieces are to be found at the General Post Office, and another is to be seen at the Water Works Company's office in Telephone Avenue.

In our last issue we published several views of Australia House, the work of Dr. A. Marshall Mackenzie and Mr. A. G. R. Mackenzie, the latter having the work under his special attention. We were enabled to give some of the contractors, but the full list had not come to hand at the time of publication; the plans also had not arrived. Since publication Mr. A. G. R. Mackenzie has written us giving a further list, and specially mentioning the work of Mr. Hamilton H. Turner, Q.S.A., quantity surveyor; also calling our attention to the stuccowork in the Exhibition Hall ceiling and the painted ceiling in the High Commissioner's room, by Messrs. Turner Lord, and the ornamental electric fittings and the great majority of the metalwork carried out by Messrs. N. F. Ramsay & Co. The sub-contractors were as follows:—Messrs. W. Aumonier & Son, stone carving, 84 Charlotte Street, W.; Mr. S. Bylander, constructional engineer. New Government Offices, Ottawa, Canada; Messrs.

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BRAINE-LE-COMTE.

Bagues Freres, metalwork, 3 Rue des France-Bourgeois, Paris; the Bromsgrove Guild, metalwork, Bromsgrove, Worcestershire; Messrs. Chubb & Sons, safes, 128 Queen Victoria Street, E.C.; Messrs. Crittall & Co., heating and ventilating, 197 Wardour Street, W.1; Messrs. Cullum & Co., fireproof floors, 92 Fenchurch Street, E.C.; Messrs. Diespeker & Co., terrazzo, 57 Holborn Viaduct, E.C.; Messrs. Farmer & Brindley, marble staircase, 63 Westminster Bridge Road, S.E.; the Forward Electric Company, office electric fittings, care of Mr. Buck, 39 Victoria Street; Messrs. Goddard & Sons, wood-block flooring, Farnham, Surrey; Messrs. Higgins & Griffiths, electric wiring, 21 Orchard Street, Portman Square; Messrs. Hampton & Sons, blinds and carpets, Pall Mall East, S.W.1.; Messrs. H. T. Jenkins & Sons (Mr. Walter Jenkins), marble, &c., hall, Torquay; the Limmer Asphalt Co., Caxton House, Westminster; Messrs. Luxfer Company, Ltd., 16 Hill Street, Finsbury Square, E.C.; Bertram Mackennal, A.R.A., sculpture, 38 Marlborough Hill; Messrs. Martyn & Co., stone carving, Cheltenham; Mr. Harold Parker, sculptor, 8 Pembroke Walk studios, Pembroke Square; Mr. John H. Pye, metal casements, Britannia Works, Moreton-in-Marsh, Glos.; Captain Riall Sankey, R.E., consulting engineer, Marconi House, Strand, W.C.2; Messrs. Redpath Brown, steelwork, Riverside Works, East Greenwich; Messrs. Shanks, sanitary fittings, 81 New Bond Street; Mr. Wm. Stark, clerk of works, Australia House; Mr. J. Starkie Gardner, metalwork, 53 Burton Court, Chelsea, S.W.3.; Messrs. Stitson, White & Co., plumbers, 47 Victoria Street, S.W.1; Messrs. the Synchromone Clock Co., 32 Clerkenwell Road, E.C.; Messrs. Waygood-Otis, lifts, Falmouth Road, S.E.; Messrs. Wylie & Lochhead, 1st floor joinery, Buchanan Street, Glasgow; Messrs. Whitehead & Sons, marble, 1st floor, Imperial Works, Kennington Oval.

ILLUSTRATIONS.

QUISISANA HOTEL, SANTA CRUZ, TENERIFFE.—THE DINING SALOON.

Only a portion of the alterations have been carried out, including lifts by Waygood. The erection of the dining saloon and bed and bath rooms over has been postponed. The designs have been prepared by Hatchard-Smith & Son, architects, 6 Duke Street, Adelphi, W.C.

SECOND SCHEME FOR HOUSE AT HATCHAM, COLD ASH, BERKS.

WORKING CLASS COTTAGE COMPETITION.

THE ARCHITECT AS A MAN.

We are passing through a great crisis in the history of the human race, but whatever the duration of the war may be, we know that an era of peace will follow in which the activities of mankind will resume their customary channels or seek new ones. No class in the whole of the community has suffered so much during the war as the architectural profession, and, as all but a small fraction of their work has been stopped, most architects have had to seek means for bridging over a long period of forced inactivity. We are told that good often arises out of that which is evil, and the temporary stoppage of their work has made many architects wonder whether there is not a means of establishing their future position on surer foundations than those on which it has rested in the past, and if this can be done the war may very well have been from a local and specialised standpoint a blessing in disguise.

We have heard much discussion as to the means to be adopted for educating the public in the value of architecture, but as charity is said to begin at home it is clear that the architect to lead and guide the public must possess the quality which we usually describe as "personality," and moreover must be quick to see and recognise what it is the public is likely to place value upon.

The invention of paper created a fundamental change in the architect's position, and, while it supplied him with a ready means of conveying his ideas, it also divorced him from much personal connection with building and with the men who carried it out. Instead of the architect or master-builder directing everything on the spot, it became possible for him to work in one place while the building he designed was erected in another. It thus tended to make him a solitary being living apart from his fellows and concentrating his attention on the products of his imagination and their presentation on paper. And in proportion as fresh energy, thought and skill has been directed to the acquisition of greater facility of delineation, there has been a tendency to eliminate close intercourse with clients and employers. Yet when all is said and done, the finest architectural drawing often fails to have the same meaning or charm for the public as a slight water-colour sketch. The architectural drawing was practically non-existent in the Middle Ages, and few examples and those crude parodies of what would be now called architectural drawings, have come down to us from that time, while in the later era of Wren the architectural draughts made as compared with those of to-day are little more than explanatory diagrams, and only in the eighteenth century did the architect begin to express himself fully on paper. The master-builder of the past may be depicted as directing workmen, the architect of to-day—like the poet—often sits in solitude burning the midnight oil and communing with his own thoughts. There is thus a tendency to live out of the world to which we all belong, and to lose touch and sympathy with our fellows. The danger of doing so is apparent, for the architect, though his work may be the noblest of all arts, is at every step bound up with most practical considerations and limitations, and of all men can least afford to ignore practical issues and the financial aspects of life.

The scriptural injunction that we should be all things to all men applies to him, and the ignorance or disregard of the broad interests which sway mankind is, we are convinced, at the root of many architects' failure. It is necessary first of all to be a good citizen, understanding and mixing with one's fellows, and then on this basis building up the technical knowledge and skill which must be mastered and possessed if we want to serve the public and in serving them benefit ourselves. We must know our work thoroughly, but this does not imply that we must ourselves be able to do every part of it, but we must be capable of taking a fair and thorough survey of the whole and see that everything is efficiently carried out by ourselves or by others. The personal pride

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and delight which many men feel in doing everything "with their own hands" sometimes blinds them to the fact that they are neglecting other and more essential work which might bring them into touch with the public. More than this, the man who learns to work with others helps to build up a school inspired with similar ideas, and more nearly approximates to the old conditions under which some of the greatest work has been done, though we know the names of few individual designers of three hundred years ago.

The broader knowledge which we have alluded to and which many architects are deficient in is the understanding of such questions as the finance of building, the commercial and legal aspects which touch it at every side, and the crucial knowledge which would enable them to make the best use of a given site. But even such special knowledge, though a qualification for the architect who serves the public, will not necessarily bring clients to his door unless it is combined with the wider general knowledge and sympathy which make a man popular and interesting to his fellows. We must sadly admit that it is not the great gifts and qualities of men which make them general favourites so much as the possession of that tact which prevents them from boring others, and the sympathy and quickness of mind which is necessary if they wish to follow the thoughts of others and to meet them on their own mental ground. The architect who attends a building committee meeting resolved to put his own special views before his clients may frequently meet with defeat, while another who is quick at understanding and gauging the personal equation of his fellow men will obtain the result he wishes for with little effort. To be a good listener is good, but to be a good listener because one has nothing to say is not enough, and the architect who would be successful should be able to hold his own in any society and to take part in a discussion at the fitting time. It should be borne in mind that the world being what it is, most of us are made happier by being with those who appreciate and like us rather than those who try to impress us with their ability, and many men have made great positions for themselves mainly because they possess a spirit of camaraderie, tact and good nature. Mankind is, in fact, not strenuously on the look-out for merit, but chiefly asks that a man should in the first place be a good companion and in the second competent and discreet. And the essence of discretion is to be able to avoid the corners of others.

We believe the architects of the new era, if they are to succeed and to effect, the "education of the public," should resemble the "surveyors" of the seventeenth and eighteenth centuries, men of the world and masters of affairs, able to understand the standpoint of the society in which they live, and will not be pale and anæmic enthusiasts living in a self-contained temple of art and somewhat despising the average run of their fellows. For do what we may, and think what we will, we are part and parcel of the sum of humanity on whose support we are dependent and whose wants and tendencies we should study and associate ourselves with. All the work of all the schools, and all systems of tuition will be valueless for the architect who has neglected the broader foundations which he, in common with men of other callings, should build upon. Not only is the proper study of mankind man, but it is the essential groundwork for everything else.

No single problem in our life stands by itself; thus housing and economics are interlocked and relative, while questions of finance will determine and limit almost every building scheme. The Finance Act of 1909—introduced for political ends—proved the most disastrous blow the building industry has ever received. Our commercial future, bringing with it building or stagnation, is dependent on the relations of capital and labour, on tariffs and other political issues.

This being so it is necessary for the architect to study and understand more than his own work in order that he may have his proper weight as a citizen and fit himself to play the part of a man of the world.

The man who overestimates the value of what he does is living in a fool's paradise, often with dangerous results to himself, and close and exclusive absorption in one field of study tends to render us oblivious of broad and important issues which may be paramount in the estimation of clients.

BRITISH ARCHÆOLOGICAL ASSOCIATION.

(Concluded from last week.)

The next place visited was the undercroft, where Mr. Johnston is to be congratulated on making a great discovery. He found there a Norman window, the only relic of Lanfranc's building. The hall is a very fine room mainly of fifteenth century date, the lower part being of Stephen Langton's time (1207-29). His walls remain at the lower level of the windows. Large tracts of tooled masonry show that they belong to his time. The hall was transformed by Stafford or Bouchier, who put in the windows with corbels of angels, and the arms of Stafford. It has been shorn of its original proportions, as two or three bays were pulled down in the eighteenth century. This hall was the dining hall of the palace, and has been the scene of much feasting in olden days. On the occasion of our visit it was occupied by busy girl-students undergoing an examination. At one end is an interesting coat-of-arms, or rather a trophy of arms, held by angels, while below it is an angel holding a scroll. This fragment was probably brought from elsewhere.

The Church of St. John the Baptist.

A short visit was then paid to the parish church, which is practically modern, as the old church, originally erected in Saxon times, and rebuilt and enlarged in the twelfth and fifteenth centuries, was burnt down in 1867. It was rebuilt by Sir Gilbert Scott, who made a clean sweep of the remains of the destroyed church and erected the present structure. The porch and parvice, the brass eagle of the fifteenth century, and the monuments of Archbishops Grindal, Whitgift, and Sheldon, have survived the fire, or been restored into a semblance of their original condition.

After luncheon at Dennett's Restaurant in George Street, the pilgrims set off on a journey to

Chaldon Church

to see the famous mural painting contained therein. The journey included a long walk over Farthing Down, a very charming bit of Surrey on a fine day, but the weather was unkind, and the rain fell unceasingly. However, at length the church was reached, and Mr. Johnston described it. Apart from the wondrous painting the church itself is interesting. Originally an aisleless Norman structure, it consisted of a nave and chancel; of this a "slit" still survives high up on the west wall. Later, about the close of the Transition period, an aisle was added on the south of the nave and a chapel on the south of the chancel. The tower and spire are modern. Other items of interest are the plain piscina in the east wall, the Easter sepulchre, a curious Renaissance tablet with the unique inscription: "Good redar warne all men and women whil they be here to be ever good to the poore and nedy. The poore ever in thys worlde shall ye have. God graunte us sumwat in stoore for to save. The cry of the poore is extreme and very sore. God graunte us to be good evermore in this worlde we rune our rase. God graunte us to be with Christ in time and space." Above are the initials R.I.E., and the date 1562. Whoever they were, they were good and pious souls who felt much pity for the poor, who were many in Queen Elizabeth's time, and did not follow the fashion of their age in magnifying the virtues of the deceased and in vainglorious boasting. There is a rare Commonwealth pulpit given by

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Patience Lambert in 1657 and some fragments of old glass in the south chapel.

The wall painting was discovered about 40 years ago, and Mr. Johnston thought that it was probably the work of a monk of Chertsey Abbey. The subject he considered to be unique, entirely sui generis; there was nothing like it anywhere else either in subject or treatment. The subject is the "Ladder of Salvation" planted on the Tree of Life or lotus plant; and up this ladder naked souls are climbing and struggling hard towards the figure of Our Lord at the top bearing a cross and surrounded by clouds. Some fail and are carried off by demons; while others are fighting their way upwards, and succeed at last. The painting is divided into four compartments. On the upper left hand division we see the weighing of souls, Satan and St. Michael contending for them. Satan has an animal's claws and three-toed feet. He has a rope over his shoulder and figures bound with rope. On the other side of the archangel are three female figures, conjectured to be the Three Marys. The angel is represented by a tall, classical, graceful figure that must be traced to a Greek source, Greek art having a far-reaching effect extending even to this Benedictine monk of Chertsey Abbey. Another angel is represented flying carrying Enoch or Elijah straight to heaven. Another angel is giving a helping hand to two souls who have struggled upwards. The wings of these angelic figures seem to be shown in active motion, not at rest, as in most representations. An angel is carrying a scroll of the everlasting Gospel, preaching to "the spirits in prison." On the right hand of the top compartment is "hell mouth" and Satan bound, and our Saviour, having a cruciform nimbus, is "harrowing hell."

In the lower left hand compartment we see two demons stirring up hell cauldron over flames. This is the punishment of murderers, especially of parricides and fratricides, who are being fearfully tormented. On the left are three women behind the demon, whose feet are being gnawed by a fearsome animal. This is supposed to refer to lewd dancers from the East, Salome and such like, who came to Western lands with the Crusaders and were denounced by the clergy. Then there is a man holding a bottle, a drunken pilgrim, who might sometimes have been seen in Chaldon, which lies on the Pilgrim Way. A woman is seen dancing with an animal gnawing her hand which had given food to dogs rather than to the poor. A huge demon has two poor souls hanging over his shoulder. In the lower right hand division are two demons holding a bridge of spikes, and on these are dishonest tradesmen, the cheating milkman, the ladies who are defrauding by their wool, the smith who is a rogue. Below are demons poking out the eyes of a usurer. Others are tempting to unlawful love, and in the right hand corner is the Tree of Life spoiled by man through disobedience. It is a wonderfully drawn tree, with the serpent amongst its branches; and hence should be interpreted as the Tree of Knowledge, but our guide has followed Mr. S. G. Waller, and he may be right. The whole painting is an extraordinary and wonderful work of art of the thirteenth century.

The Rector, the Rev. G. E. Belcher, kindly invited the members to tea at his house, which was much appreciated before the long walk back to Coulsdon station, and he was cordially thanked by the President. The way was long and the present writer was nearly the only pilgrim who caught the return train. However, by divers ways, railways, trams, omnibuses, and motors, the rest of the company at length reached London.

The Temple.

On the last day of the Congress the members visited the Temple, which is so well known to the readers of "The Architect" that a detailed description is perhaps unnecessary. Mr. Johnston, however, ably described its beautiful architectural features, and pointed out much that was not generally known except to those who had studied very deeply this profoundly interesting building. Mr. H. Malden, Secretary of the Royal Historical Society, told the story of the fall of the Templars, and as the weather was unpropitious, Mr. W. A. Cater read his paper here on the Carmelite Priory of Whitefriars. Some adventurous spirits explored the crypt of the destroyed chapel of St. Anne on the south of the Round, and the triforium gallery was inspected.

After luncheon at "Ye Olde Cheshire Cheese," where Dr. William Martin, F.S.A., described its association with Dr. Johnson and an inspection of the cellars where the beams actually charred by the Fire of London can be seen, the party visited the Halls of the Inner and Middle Temple, which Dr. Martin ably described, and with a visit to the church of St. Clement Danes and a reception at Dr. Johnson's house, No. 17 Gough Square, the Congress terminated. Cordial votes of thanks were accorded to the Hon. Secretary of the Congress, Mr. W. A. Cater, F.S.A., and the Treasurer, Mr. R. Bagster, F.S.A., and especially to the Director, Mr. Philip Mainwaring Johnston, F.S.A., F.R.I.B.A., for his many illuminating addresses and learned descriptions of the places visited.

AN UNPUBLISHED BOOK OF ÆSOP.

No. 1.—THE CRITICS AND THE ORACLE.

Among the noblest cities of Magna Græcia Syracuse was the most renowned both for the magnificence of its buildings and the skill and cunning of those who devised them whom men called architects. And seeing that architecture was an honoured calling and the works of architects were studied, divers scrolls were written in the city copies of which were distributed to those interested in return for a recompense in drachmas, and in these were the works of architects described, and many of them were made clear even with diagrams, that the cunning of the architects might be made more widely known and clients might wait upon their doorsteps.

But many said "it is true that the writings contain much information yet is there little criticism. Surely it were well that the good should be commented on, but the defects should also be noticed." But they who wrote the scrolls found by experience that the architects of Syracuse were sometimes somewhat thin of cuticle, growing hot at a word of criticism and avoiding the writers of those scrolls who ventured to call attention to points which might more justly be otherwise expressed. And the dilemma in which the writers of the scrolls was placed being grievous, and the difficulty felt by them being of serious moment, they determined to send one of their number to consult a famous oracle in the ancient land of Egypt in the hope that a clear way between the Scylla of criticism and the Charybdis of apparent ignorance of matters architectural might be straightway revealed and made apparent. And having sacrificed to the gods and made offerings at the shrine of the oracle, the hidden voice gave an answer in this wise:—

"Thy difficulties truly are great, but such difficulties beset the footsteps of mortal man until he steps in the boat of Charon and crosses the waters of Lethe. For a man either believeth his work to be good, in which case he taketh not kindly to fault finding, or he is in his secret heart uncertain, in which case he careth not to be further discomforted by those who speak with authority. Therefore lest ye wish to be placed in a grievous doubt and black perplexity faced with danger, whether ye speak truth or hold thy counsel for fear of offending, thou shouldst in the first place take exceeding care to only give the devices which are best and which with sincerity thou canst bestow praise upon. And if mayhap it is necessary to show aught else, then canst thou call attention to the size of the work, the precious materials which are employed in its building, the intricacy of the problem to be solved, and the difficulties met by the architect because

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MONS.

of the insistence of his client. More than this, thou canst in dealing with the work of the past, the work of those who have passed away, say what thou wilt, and all will know that thou withholdest criticism of the work of the living because of thy judgment, and not of thy lack of understanding."

Then the scribe of the scrolls having made obeisance took a swift vessel from the land of Egypt even unto Syracuse, and tried in that span of life which was his ever to tread in the paths of wisdom.

But because the architects of Syracuse were many and their views differed one from another, the scribes of the scrolls had ever many difficulties, nor could they please all who studied their sayings.

Moral.—It is easier to criticise than to perform, nor is it feasible on all occasions to speak the truth, the whole truth, and nothing but the truth

BRITISH SCIENCE PRODUCTS EXHIBITION

The Press view took place on Monday last of the British Scientific Products Exhibition, when a number of scientific, technical, and trade journalists were present at the invitation of Professor Gregory and the members of the Committee at King's College, Strand. At the opening meeting, which took place in the Lecture Hall, presided over by Mr. Leon Gaster, F.J.I., Chairman of the Scientific, Technical, and Trade Circle of the Institute of Journalists, Professor Gregory, the Chairman of the Committee of the British Scientific Products Committee, in his address, stated that industrial advance seems to depend upon three main factors, in all of which brain and hand are related, though in different degrees. First, there is the creative investigator whose work reveals new properties and relationships; then comes the inventor or industrial researcher who seeks to apply knowledge to useful ends; and when a practical process or machine has been devised, the artisan is needed for its construction or technical use. Each of these three classes has an essential place in national life, and the correlation of their interests and activities should be the chief aim of statecraft.

It is not too much to say that since the advent of the war much more intelligent attention has been paid to this problem of effective co-ordination than was given in earlier years. The spirit of distrust which formerly existed between scientific workers and manufacturers has been largely dispelled, and an alliance is being formed which should go on increasing in strength for the benefit of each and the promotion of national prosperity. The man of science formerly confined himself too much to an academic atmosphere, and did not trouble to understand the problems of industry, while the manufacturer neglected to avail himself sufficiently of the potential industrial developments represented by the rich stores of scientific knowledge accumulated in the laboratory. During the last four years, however, science and industry have been brought into closer relationship, and some of the results of this entente cordiale are shown in the British Scientific Products Exhibition.

The aim of the Exhibition is to stimulate public interest and confidence in the capacity of British science combined with industrial enterprise to secure and maintain a leading place among progressive nations; and the object is the full development of our mental and material resources. It has been popularly assumed that original scientific work was almost a prerogative of Germany, whereas a slight acquaintance with scientific history would show that most modern industries have originated with British science and invention. In purely scientific research of initiative quality we have been the pioneers; where we have been deficient is in the practical use of the results obtained and the application of our natural scientific genius to the solution of industrial problems.

Under the stress of war, and protected from the dumping methods which strangled promising industries almost at their birth, the opportunity has arisen of proving the latent capacities of many of our scientific industries. The story of what has been accomplished in several notable directions is told in articles contributed by competent authorities to the descriptive catalogue of the Exhibition and by the notes on the exhibits themselves. It is appropriate to mention in this place the work done by Sir Herbert Jackson, professor of chemistry in this College, to provide the chemical glass and optical glass urgently needed when supplies from Germany and Austria were cut off. Working with a committee of the Institute of Chemistry, Sir Herbert Jackson determined the composition of numerous glasses required and placed the formulæ freely at the disposal of manufacturers. The result was a reawakening of the glass industry in this country; and a position has now been secured which is strong enough to enable our manufacturers to meet all assaults upon it. The pure potash required for certain glasses is now obtained by a new electrolytic process; and we need never again go to Germany for it or for the glass itself.

Our chemical manufacturers are meeting all demands for such synthetic organic drugs as salicylic acid and aspirin, phenacetin, salvarsan, and many others, photographic chemicals, synthetic dyes and associated products, as well as hundreds of similar substances of which Germany had the monopoly. The magneto industry has established itself in a sound position, and the German instrument has been displaced for good. Hard porcelain for electrical fittings and laboratory ware is now British-made, thanks to scientific work and industrial enterprise. We produce all the tungsten required for special steels and metallic filament lamps, and can supply the world if necessary; we make aluminium alloys superior to any of the German pre-war products and like success has been attained in other directions.

While our military, naval, and air services have been actively engaged in battle, the allied forces of science and industry have been making advances no less noteworthy, though their conquests do not occupy much public attention. What has been achieved in scientific industry since the outbreak of hostilities is most creditable, both to scientific workers and manufacturers, and the Exhibition affords an object-lesson to the public as to their strength and adaptability. Much remains to be done before we can recover all the ground lost by inactivity and unwise

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government; but by giving an indication of what has been accomplished during the last four years the nation is provided with both a lesson from the past and a promise for the future.

The Exhibition, which was formally opened by Lord Sydenham on Wednesday, is particularly interesting and instructive, and is an enterprise which deserves the support of our readers, who should take the opportunity of visiting King's College, and by that means be enabled to get some conception of the valuable scientific research work which has been carried on during the past four years, and without which we should long ere this have been a defeated nation.

THE MAKING OF ARTIFICIAL PITPROPS.
NEW INDUSTRY AT CARDIFF.

"Mr. Edwin Seward, F.R.I.B.A., of Cardiff and Weymouth, has succeeded in securing letters patent for his invention for making pitprops of reinforced concrete, the special features of which are greater strength and permanency over timber and the utilisation of clinker and cinders within the precincts of the collieries. The delay of many months is ascribed by Mr. Seward to German influences in an attempt to disqualify his invention in favour of one originating from Düsseldorf and another from Berlin. A judge disposed of these claims."—"South Wales Daily News," August 7, 1918.

A year and a half ago Mr. Lloyd George showed that, owing to losses of ships by submarines and such causes, the use of tonnage for timber must be virtually abolished. Since then it has been increasingly evident that for many years hence timber importations to Great Britain must be restricted within very close limits; whilst in the opinion of many experts imports of pitwood—the timber required for supporting roofs of mines to replace the continuous cutting out of the solid coal—must be regularly reduced for a long period of years.

The readiest substitute method—yet a very futile one—is to hew down and bury in the mines the native timber of our fine British forests and woodlands, a proceeding rapidly and most lamentably extending, which is causing ruin and devastation to a multitude of beauty-spots within these islands. According to a recent writer of authority, over three million tons of timber were thus felled in 1917, whilst for the current year the Timber Controller asks for six millions of tons. This vast demand is ever increasing, and though special measures for supply be taken, it is clear that Russian, Baltic, and French supplies are now, and will remain, too closely concerned with paramount demands from their war areas to be reckoned at all; whilst our colonial timber will always hereafter have its own growing demands and tonnage troubles.

Years before war pressure arose these timber shortages had in some quarters been foreseen.

As might be expected, the Germans early perceived their high importance, and, with respect to pit timber, they very persistently and quietly tried to introduce various timber substitutes particularly into the coalmines of this country. Further, certain firms and persons in England more recently awoke to the imperative need for a better and more permanent method than that of using up tree-trunks to uphold the colliery workings, and these alternatives (composed chiefly of metal or of concrete) have to-day reached various stages of usage.

The very practical method of applying reinforced concrete for producing substitute pitprops above referred to was invented by Mr. Edwin Seward, the well-known architect, of Cardiff,* as the outcome of much experience in ferro-concrete constructions. This, moreover, had grown out of "Reports and Examinations on Local Building Industries" which Mr. Seward in 1904 was requested to place before the Tariff Commission—an early date compared with any of the concrete pitprop devices which have more recently been brought forward. Mr. Seward's Celtic pitprops are the result of many experiments in the making, of tests, and of discussions with engineers, working timber-men and colliers, some of whom have spent almost their lives underground.

His views were set out early in May 1917 in a communication to colliery managers and engineers, &c., as follow:—

In an address to Derbyshire miners on March 20, 1917, Mr. Frederick William Wile said:

"Derbyshire is remote from the sea, but U-piracy aims none the less at the very existence of British miners. Helfferich, the Vice-Chancellor, recently gloated in a public speech glorifying U-boats that they were striking at the bedrock prosperity of Great Britain because they were preventing the shipment of pit timber, and thereby endangering the life of every pitman in British collieries."

Now that a perfect and immediate remedy is available, why should the miners of Britain allow the enemy to thus kill their livelihood and threaten their lives?

Now, when the miner can at once make for himself the best possible pitprops at the pit-mouth in any locality, why should mineowners and colliery companies permit a malicious enemy to stop their output and ruin their property?

Now, when ordinary pitwood (often variable in size and poor in condition) can be forthwith substituted by sound, indestructible pitprops of standardised dimensions and primest quality, why should landowners permit the enemy's knavery to decree ruthless destruction on the beautiful groves and forests of Britain?

Even if our larch, oak, beech, or pine timber should continue (in a wasteful and risky manner, which soon may reasonably become obsolete) to be buried in the small coal and debris of the mines, long years must elapse before any timber now planted can grow to a sufficient strength for future cutting down and burying.

Already much of Britain's sylvan beauty is under threat of being swept away at Germany's imperious bidding.

From to-day this destruction of the acres of our country's woodlands is quite unnecessary, and should cease.

There is considerable and rapid decay of timber pitprops in damp and in flooded mines; also they may burn very destructively in cases of colliery fires.

The "British-Premier" Celtic pitprops cannot be burnt and they do not deteriorate or corrode in water or damp.

They are stronger than timber for permanently upholding colliery roofs as a defence against troublesome, litigious, and always costly settlements of surface lands and buildings, and against "squeezes" and strains underground.

They are simple in construction, and can quite easily be made by the collier, his wife, or his boy, thus providing a useful, healthy occupation above ground, as near as may be to the pit-head. In nearly all collieries the chief component material exists close at hand, being the ordinary colliery cinders, stone and crushed clinker when washed, manipulated, combined, and duly strengthened. The finished weight of a Celtic prop is light enough to allow of efficient handling by one timberman, being very little heavier than an average firwood timber prop of fair size.

The saving of tonnage at sea and on docks and railways required by Mr. Lloyd George and other Ministers demands that a substitute for pit timber shall be found within this country; other circumstances (among them the increasing scarcity and value of all timber) insist on it as a matter of immediate urgency.

Only local material and labour are needed in their making. By their use freightage costs of every kind are almost entirely wiped out, thus helping to provide for the "British-Premier" Celtic pitprops being made at and used at any colliery under normal conditions at a

* It is pleasant to recall Mr. Seward as a contributor to "The Architect" from its earlier issues.

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rate as cheap as timber, whilst also conforming (patriotically) to such conditions of National Service in respect to tonnage as are above referred to.

The nature and constructional details of these pitprops have been prepared in discussion with leading consulting engineers. They efficiently represent in structure the vascular tissues of timber, but they can be produced in length and girths of any reasonable standardised dimensions for special seams or situations. All the component materials are not only handy and cheap, but they are permanent and indestructible, so that if their removal to some fresh position in a colliery is at some time desired they would, following ordinary care in first fixing, be found intact and sound for such purpose.

They can be produced ready notched to any angle, rebated or bevelled at ends, according to requirements of managers of collieries of long experience, so as to spread out at feet for trussed overhead archings. They can be used in combination with timber if desired, and, even if timber can continue in use for stalls or minor positions, the Celtic props, trussed overhead as indicated, are a perfect framing for the main roadways.

Standardised, straight, clean, and sound, they should have been in use a century ago; they should continue to be used as long as the collieries themselves.

The "British-Premier" Celtic pitprops are a true war economy. They must necessarily become an after-the-war industry.

The Celtic pitprops, previously to obtaining Royal letters patent, have been used with very good results in several leading collieries in South Wales and Monmouthshire.

Their structure shows a cage or skeleton of metal reinforcements ingeniously and scientifically devised, though of very simple construction; this is closely embedded by a calculated proportion of the specially compiled concrete, so distributed as to allow of ease and lightness in handling and compact toughness in use. In the pits the props are used either as single units vertically on end, with the usual "lids" or wood caps, or they can be combined to form lintels on struts for colliery roadways, in combination (if desired) with ordinary timber lintels (collars), or as alternative struts therewith; the concrete lintels having always a special form of reinforcing designed to bear and to transmit tensile strains. One of the usual disadvantages of concrete (as of stone) props or lintels in a mine is their innate rigidity, whereas timber (under compression) often usefully bends and thus shows the great pressure transmitted from the colliery roofs; but yet, timber thereby often splits and fractures disadvantageously, or even disastrously.

Under Mr. Seward's patents these pressures allow of slight spalls at the end edges of the concrete props, thus providing very useful indications as to the true locality or direction of the pressures, which, by slight deflection of the patent lintels or collars, and by the careful formation of the rounded skew-back and splayed shaping of the ends of both collars and props (ready-made in the concrete), allow a slightly movable connection at the point where the struts and overhead lintels come into contact. These "barometer" spalls and "knuckle" joints and the small cracks which may necessarily appear in the crust of the concrete (owing to that material being non-resilient), are an instant help to the scrutiny of the inspecting timber-man. It is found that the metal skeletons (in spite of surface cracks) keep compactly in their true efficient position. In a large pit of the "Ocean" Coal Company, in "Powell-Duffryn," and also in pits elsewhere, the Celtic props in their underground tests were—after use—found with reinforcements intact, whereas near at hand, under the very same pressures, the usual timber props were found to be badly splintered, fractured, and in some cases broken down.

The element of permanence in these Celtic props is, further, of much importance. Under that head, when advocating the use of concrete props, an expert, Mr. W. A. Machin, Assoc.M.I.Min.E., recently wrote: "This is a great point in favour, because the cost of renewals will be proportionately less. It is common knowledge that a prop or a bar costs more to renew than it is worth, without taking into consideration the possibility of the roads being stopped through dirt having to be removed in the wake of broken timber. They are fireproof, a factor of importance. The writer has known a fire caused by the fusing of an electric cable to burn for weeks with only the timber props, &c., to feed it. Had the roadways' roofs been supported with concrete props and girders the fire would have been immediately overcome, and in all probability would never have started."

Following on the granting of letters patent to Mr. Seward, as inventor of the Celtic pitprops, their manufacture now promises to be the foundation of a most requisite industry.

Cardiff long ago grew to be the recognised centre of Welsh coal production, a position it strenuously upholds, and it might therefore be expected that Mr. Seward (who is the architect of the Cardiff Coal and Shipping Exchange) should be laying down the means for making these concrete props within that city. He has there set aside a site on land of his own near to stations of the Taff Vale, the Rhymney, and the Great Western Railway Companies for starting the making of quantities of these props (though the work must be somewhat limited at first owing to difficulties of war conditions).

This beginning will increase later on by the application of outside capital and manufacturing space. On this site a suitable building with considerable storage area for turning out thousands of them has just been completed. Incidentally it possesses, architecturally, features designed in Celtic character. The production of these artificial props will thus be resumed and continued, together with the work of teaching to colliers and others the requisite processes for utilising Mr. Seward's patents by arrangement with him as the patentee.

That issue of the operations is a very salutary one—the teaching of methods of making by the men themselves at the collieries, the crushed clinker, gravel, and even the cement which forms the chief components of the concrete being usually obtained quite easily at the collieries. Under this head is to be noted the idea of a manager of one of the larger South Wales colliery companies (which already guarantees healthy remunerative employment to its disabled workmen returned from the war), who intends thus to utilise in open-air near the pits the services of those men and youths in making the Celtic props within the colliery precincts.

An industry which provides sound, healthy work, and which embodies the right altruistic spirit, is surely well worth upholding, and, as we gather that Mr. Seward has up to the present provided the whole of the requisite capital himself, we may hope to find that many others will join with him to make a truly powerful combination for thoroughly developing his valuable project.

A GLIMPSE INTO THE PAST.

Written in this year of grace, A.D. 2918, to his friends in New Zealand.

By Master W. N., of Auckland.

"In the World-history, my dear Sir, periods of progress alternate with those of quiescence and retrogression. Can we say for a certainty that the progress is greater in proportion than either of the others? Are not the words of Koheleth of abiding truth—'The thing that hath been shall be; and that which is done is that which shall be done; and there is no new thing under the sun. Is there anything whereof it may be said, See, this is new? It hath been already of old time, which was before us. There is no remembrance of former things, neither shall there be any remembrance of things that are to come.' The King-preacher, having touched the topmost heights

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and sounded the lowest depths, was in a position to speak from a full heart; and despite the many thousands of years which have elapsed since he uttered those words, there is no need to question their accuracy. Truly, the revolving and recurrent seasons show in petto how our vaunted progress is but as exercise on the old discredited treadmill."

I, your faithful friend, Wunnu Nohz, was in conversation with a native of the great North-Western Republic; we were in Columbiapolis, and at my hotel I met this gentleman, who, with the courtesy born of centuries of civilisation, endeavoured to make my sojourn in America agreeable. I related to him my various adventures en route from Auckland, and told him the impressions left upon me by what I had seen. Much did I marvel at the evidences of progress to be met with in his great country—evidences political, social, economic, artistic, and (above all) scientific. I was enthusiastic to a degree, and waxed, I may not say, eloquent, but perhaps, grandiloquent. My new friend smiled quietly, and gave utterance to the remarks which I have quoted above.

Now, my dear friends, you know that I am not a widely-read man, and my views are just those that anyone reasonably intelligent and of receptive memory would be likely to entertain. The habits of a country such as ours tend rather to restrict the activities of the mind, even as it tends to enlarge the activities of the body; and I hope, as a result of my world-journey, to find my views of life broadened and my knowledge of mankind and his works appreciably increased.

In my previous letter I told you how, on leaving New Zealand, I travelled somewhat circuitously by way of China, Thibet, India, across the Sea of Arabia, and thence by the Indo-Atlantic Railway across Africa, that wonderful continent whose territory is so largely British —British from Cape Town to Cairo, though France, Italy, Portugal, and Belgium are all territorial proprietors to a smaller extent. I broke my journey at several points in Africa, closely inspecting New London, the world's arch-metropolis. On quitting the continent I aeroplaned to Columbiapolis, where I made many interesting inspections, and even more interesting acquaintances, including the venerable Professor McMuchikin.

My goal, however, was, from the time I left Auckland, the progenitor of the African capital, that old London in those far-off British Isles whence at one time world-politics were swayed, subsequent to the decline of Rome, Spain, Austria, and other ambitious Powers. Perhaps you have forgotten that my ancestors were English centuries ago; leaving the Isles of Happiness and Plenty when the plenty and happiness showed signs of decadence for a time, one of my ancestors migrated to New Zealand, and there established himself and prospered. My love for England is therefore ingrained, inborn, inbred; and though the eyes of the multitude should turn to the great African Continent, my own yearned for an exploration of the so-called vestigia of Old London—that gem set in the far-off lonely and lovely isles.

If my prologue has been lengthy pray pardon me, and even bear with me while I yet add that the transference of the metropolitan centre from Britain to Africa did not take place for some lengthy period after my ancestor's emigration, and only then was effected for reasons of policy and not because of any decay in the might of the British Empire, which is, as you well know, more hegemonous now than at any previous period.

Well, then, I was holding converse with my American friend, and thus answered him:—"You do well, Sir, to recall the words of King Solomon, and I freely acknowledge that our so-called progress may be but a recurrence of a former civilisation. But, after all, my remarks were directed to a comparison with existing civilisation, and are, as I think, therefore justified."

Now that was not quite honest on my part; at any rate, it was specious, for my enthusiastic outburst in regard to scientific progress took no thought of resuscitation. But I was young and my friend was old and courteous, so with a smile he dismissed the discussion, and we talked of other matters. However, his words set me a-thinking, and in the sequel my ardour for present-day "progress" in the arts and sciences was damped when I viewed the wonders of Old London.

Let me transport you in imagination thither without further delay, even as I transported myself bodily by aeroplane from Columbiapolis. Do not imagine for a second that the British Isles are deserted—by no means so; but they are given over now to agriculture and produce far more than as a place for housing, the latter being ancillary to the occupations; the isles may be largely regarded, indeed, as both the flower-garden and the kitchen-garden of the Empire, though here and there mining is a conspicuous industry.

Old London is not really a heap of ruins, as you and I imagined. Some of the buildings are dilapidated, some fallen and left as, perhaps, too sacred for repair and restoration. But for the most part the buildings are maintained in a condition of orderly upkeep, a permanent museum of the eclectic proclivities of the architects of old.

What a curious assortment were those architects! "By their fruits ye shall know them?" Yes, but not by their fruits shall you rightly discern the century of their architecture, for that is to be known only from sources other than the Style of design. Greek, Roman, Byzantine, Romanesque, Pointed (more loosely termed Mediæval, and more basely termed Gothic), Early Renaissance, Queen Anne, Georgian (so beloved in America)—all these in their origin and development could be traced and pursued from stage to stage. But, Heaven above us! from No-popery to All-popery days (say A.D. 1780 to 1980) a series of revivals was commenced and continued in more or less slavish copyism of departed Styles, thus robbing architecture of its true artistic flavour and merely at times appealing to a false æstheticism, and delaying the production of a timely vernacular.

Delaying, but no more than that. In the earlier years of the twentieth century, a rising school of architects began slowly and laboriously to hammer out a distinctive style—known in its earlier stages as Free Renaissance—an adaptation to the needs of the day. Prior to that, as indicated above, and incidental to the publication in England of drawings of the classical remains of ancient Athens, the days of copyism commenced, the day of gloomy columns and unmeaning porticos, of bucrania decoration at a period when the sacrifice of oxen at the altar was no longer indulged in; of contemporary memorialised public men being carved out with the toga-virilis and the classical get-up. Churches, public buildings, private houses—all, all had to submit to the procrustean tyranny of Athenian and Roman art (of which latter, anon); indeed I came across one notable example which reproduced to a great extent the famous Erechtheium of the Athenian Acropolis—a Christian church taking the outward semblance of a heathen temple. O, tempora! O, mores!

Yes, Classic revival proved a veritable Frankenstein and grew so tyrannous that a réchauffée of old English vernacular art was bound to be accorded a hearty welcome. From Augustus Welby Pugin and Sir Gilbert Scott down to Alfred Waterhouse, the most was made of a revival which possessed no element of real vitality; the men were clever exponents and were capable of introducing developments, but the revival was not fanned into flame by any public approval. Indeed, the Battle of the Styles proved a true battle of Kilkenny cats, all eventually killing each other. For side by side the copyism of all the old styles was indulged in; the publication of Stuart and Revett's "Antiquities of Athens" was followed by that of Taylor and Cresy's "Antiquities of Rome,"* and other works and monographs of like nature. I, my friends, have no intention of producing "The Antiquities of London," however. But I might have

* By-the-by, "The Architect" republished the plates of this monograph (by purchasing the series) in 1917 and 1918—just a thousand years ago.

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done so, had not the more archaic buildings been preserved in book form through the laborious studies of cognoscenti. There is an excellent monograph of St. Paul's Cathedral,* and it is well there should be, as the building is now nothing but a mass of ruins; the noble monument of a noble architect suffered because the public of the time would not provide adequate funds for remedying the defects of the subsidences caused by overloading above and undermining beneath; responsibility, of course, partly rests with the architect, but even so it was a noble pile and he was a great man. The cathedral was to have been rebuilt, but before the preliminaries were well advanced the seat of empire was transferred, and there a newer, stronger, and not unworthy fane has arisen to eclipse the glories of the old.

The extended use of colour on the external faces of buildings is commendable or otherwise, in proportion as the prevailing atmosphere is sunny or murky. Oriental and Italian skies favour polychromy, whereas Old London demanded neutral treatment, and for the most part received it. Some instances of the abuse of colour I noticed, such as the pot-brown façades of the stations on one of the old Tube railways—verily, they made my gorge rise. For the sake of differentiation was it, or for the sake of advertisement? Probably the former, but even so it was unjustifiable æsthetically; the golden-yellow and the warm buff used by other Tube railways were commendable and served adequately to differentiate the buildings from their neighbours.

Pot-brown may be bad, but crude blue, crude pink, and crude green are worse; Heaven be praised that their use was, as far as I can learn, restricted. Some instances I noticed on façades in Fleet Street (that rendezvous of the Fourth Estate), and I observed a very orgie of blue on a façade near Tottenham Court Road. For polychromatic treatment I may commend a certain private house, which I saw in Kensington, and, to a lesser extent, one frontage which I observed near Oxford Circus.

A curious feature, as it seems to me, is one to which my attention was directed by a chance acquaintance, namely, the use of repetitive design in some instances, the object apparently being to obtain symmetrical treatment. A large block of buildings off the Strand consists of an hotel for the central portion and of two theatres as the wings or flanks, the latter being designed externally as twins. And this, too, is the case with some buildings near Cambridge Circus, the wings being symmetrical theatre-blocks and the central portion consisting of shop premises. Surely, surely, this is not true art!

I remarked earlier as to the hammering-out of a distinctive twentieth-century style. Yes, but I do not think that I am an admirer of it; were I laudator temporis acti, I should of course enthuse, but I must confess that Edwardian and Georgian architecture, which succeeded the Victorian era, does not please me. Free Renaissance, forsooth! Yes, free from all the best qualities of the earlier Renaissance and with nothing nice substituted. Oh! ye "Morning Post" Offices, ye Ritz Hotel, ye insurance office barbarities in Piccadilly, ye &c. and so on—are ye the New Art, the New Style, of which nineteenth-century writers wrote and nineteenth-century lecturers lectured?

"Too long ye've lived, who raising up a pile,
Turn it top-turvy and call it a New Style."

But let me be just, even in my wrath. There were elements in the new feeling which, properly nurtured, might have led to noble results even then, instead of its being left for the thirtieth century to show a really artistic creation. Some buildings I observed, treated simply and with dignity and discrimination, which are lasting monuments of what was possible. Charing Cross, Oxford Street, even Kingsway, exhibit some of these, and I am glad of the opportunity of bearing testimony to their merits. But oh! my friends, how few the pearls, how many the ugly caskets. Nay, do not criticise the simile, if you understand me aright.

But is it not extraordinary, in all these hundreds of years from the supremacy of Athens to that of London, the same limited round of architectural design (with here and there, now and then, something fresh thrown in), the same limited round, I say, was still being travelled? It needed my American friend to point this out to me in the first place; my own experience, gained in this the world's former metropolis, has served but to confirm the accuracy of his views (for even the thirtieth-century art is not, in its essence, new). And, in conclusion of this lengthy (but I hope not wearisome) letter, let me tell you of another of my discoveries respecting English architecture, namely, that the great factor controlling it during the twentieth century was Affectation, and that, too, of a dual nature—the affectation of simplicity and of luxury. Which is the worse? Indeed, they are equally deplorable; l'art nouveau (as it was then designated) affected simplicity, which in the hands of its devotees was unmitigated ugliness, and the Rococco of the first half of the eighteenth century in France found adherents in England a century and a half later concurrently with the worship of the Simple. This is curiously shown in a large Exhibition at Shepherd's Bush, where from time to time the buildings, originally erected there at the commencement of the twentieth century, are (through an entirely false sentiment of veneration for past work) renewed in the same style of design; and what a design! the very degradation of art. These were professedly Exhibition architecture, which admits, perhaps, of extravagance; but when we see this affectation of luxury in permanent buildings, then indeed it is a humiliation to us, even as if we ourselves were criminal, instead of being but spectators.

But I must stop now, my friends. I may perhaps write to you once again before I leave these halcyon isles; if not, I will reserve all for oral intercourse—and now adieu.

* We do not know of this.—Ed.

THE TIMBER INDUSTRY.

By Mr. Percy Gridom, M.A., D.Sc., F.L.S.; Professor of Technology of Woods and Fibres, Imperial College of Science and Technology.

(Concluded from last week.)

Another method of improving woods, and especially those of inferior quality, is that of changing their colours and thereby improving their decorative value. By this means unmarketable colonial woods may be rendered of use. Such changes may be induced by steam, by chemical treatment with vapours or solutions, by treatment with dyes, or finally by exposing the wood to the action of fungi or bacteria. Except as regards the production of fumed oak by ammonia vapour, this branch of industry has been neglected in this country, which imports such stained woods as grey sycamore, artificial ebony (for piano-keys, knife-handles, and so forth).

As an illustrative case, reference may be made to grey sycamore, which is obtained from ordinary white sycamore by means of simple and cheap chemical treatment. Yet for years white sycamore was exported to Paris and Hamburg for treatment, and re-imported into England at an increase of price perhaps fifty times the true cost of the process. Great Britain does, however, export one unique type of coloured wood, brown oak, which, owing to its richness of tint, is much more valuable than the ordinary British oak. At the Imperial College it was discovered that the brown colour is induced by a fungus, and that by growing the latter upon ordinary oak this is converted into the brown wood. It would doubtless be possible to devise a method by which this exceedingly profitable conversion could be conducted on a commercial scale.

The chemical utilisation of wood forms too wide a subject to be dealt with except by allusion. As a means of using up waste wood (sawdust, shavings, slabs) in the sawmill, or waste trees in the forests of the Colonies, mention may be made of the destructive distillation of

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WORKING CLASS, COTTAGE COMPETITION

CLASS. A.

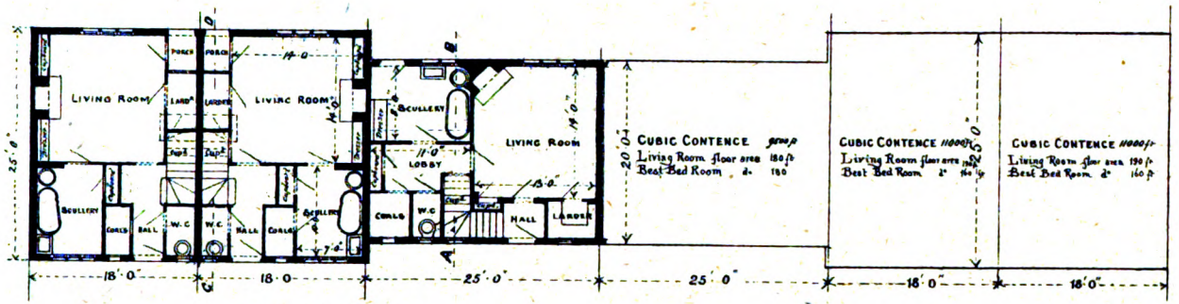


FRONT ELEVATION



BACK ELEVATION

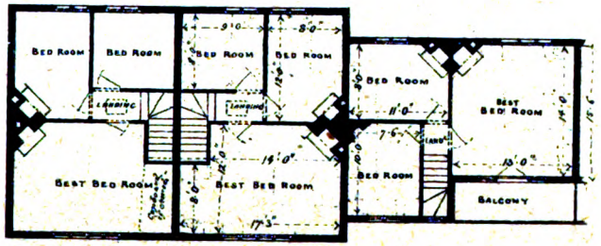
NOTE These Cottages are designed to secure the most pleasant view in the Block



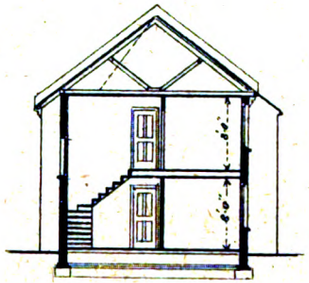
GROUND FLOOR

Party Walls to be in brick. The roof covered with Patent Tiling. Concrete block internal walls to theb partitions. Combination stove and range enforming. Wood floors to be prepared and Pugged, sheeted and ceramided. Matting Mattes concrete floors.

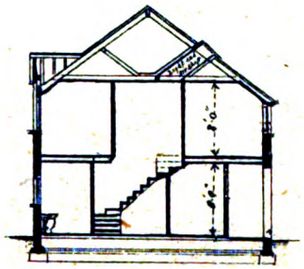




FIRST FLOOR



SECTION A.B.



SECTION C.D.

Scale of Feet

F. NESBITT KEMP
Architect & Surveyor
14. FEATHERSTONE BUILDINGS W.C. LONDON

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WORKING CLASS COTTAGE COMPETITION. CLASS A.
F. NESBITT. KEMP. ARCHITECT.

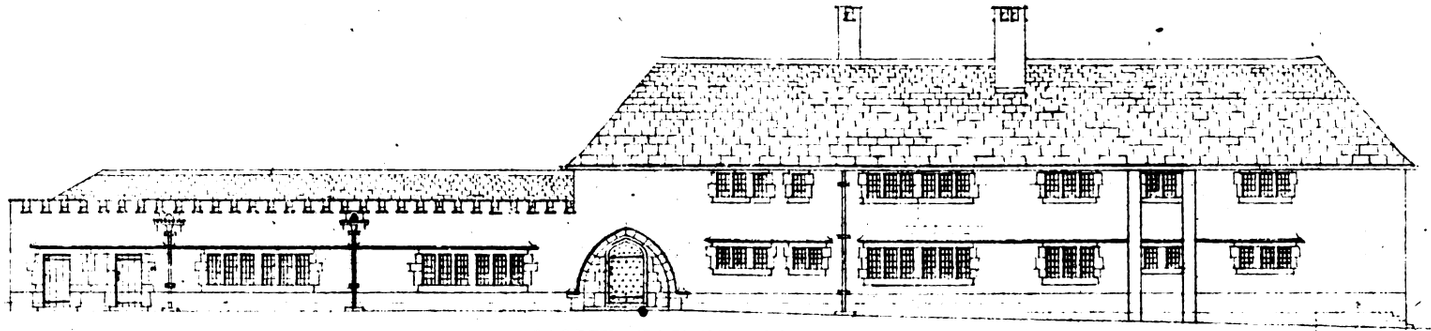
The Architect, Aug 16th 1918.

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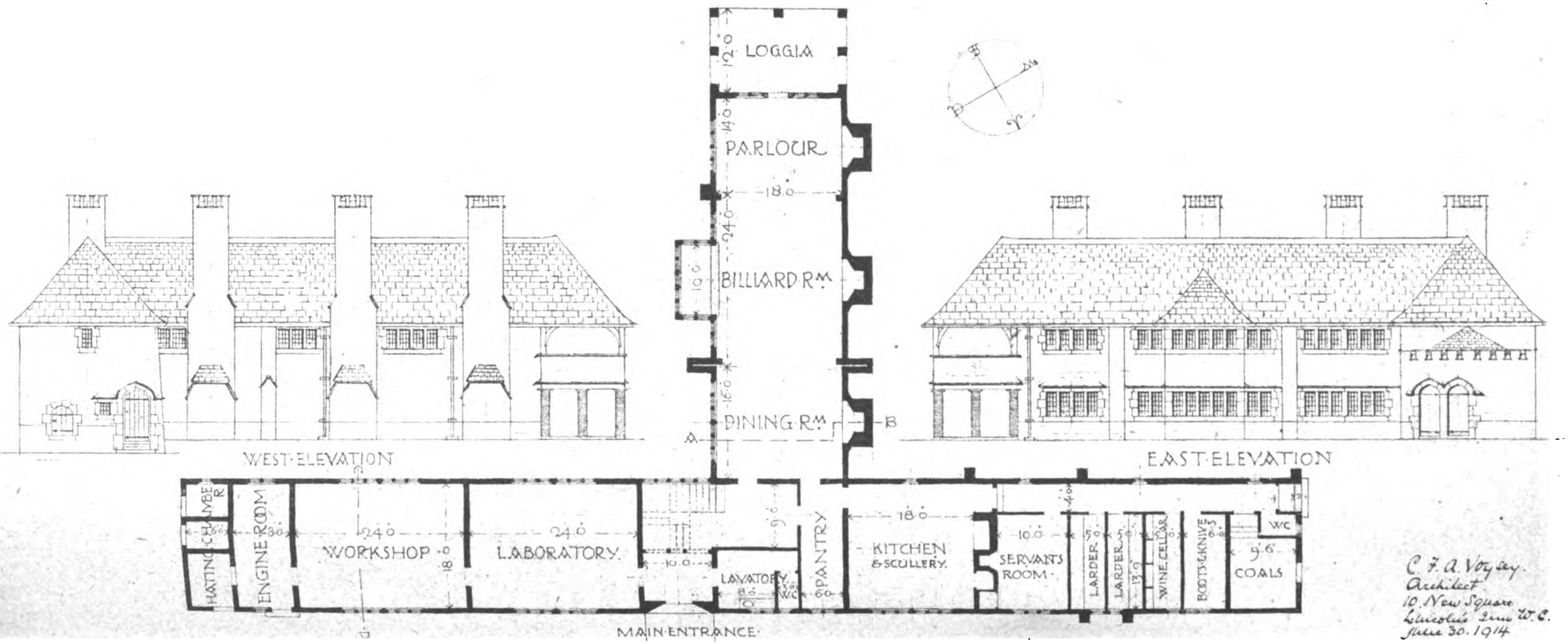
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SECOND SCHEME FOR HOUSE AT HATCHAM COLD ASH BERKS FOR H TINGEY ESQRE



NORTH ELEVATION



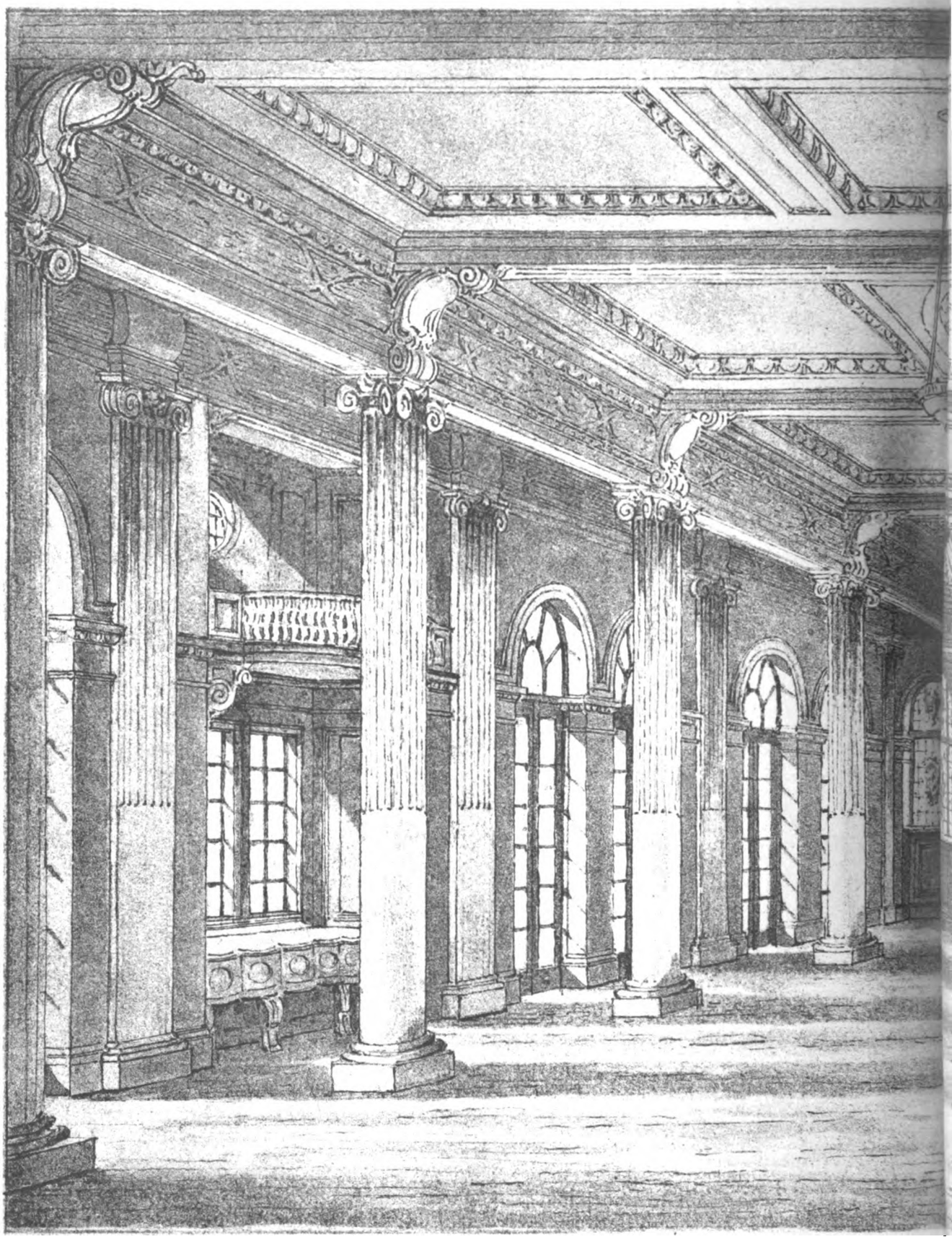
C. F. A. Voysey
Architect
10 New Square
Lincoln's Inn W.C.
June 30. 1914

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QUISISANA HOTEL, SANTA CRUZ.

MESSRS. HATCHARD SMITH

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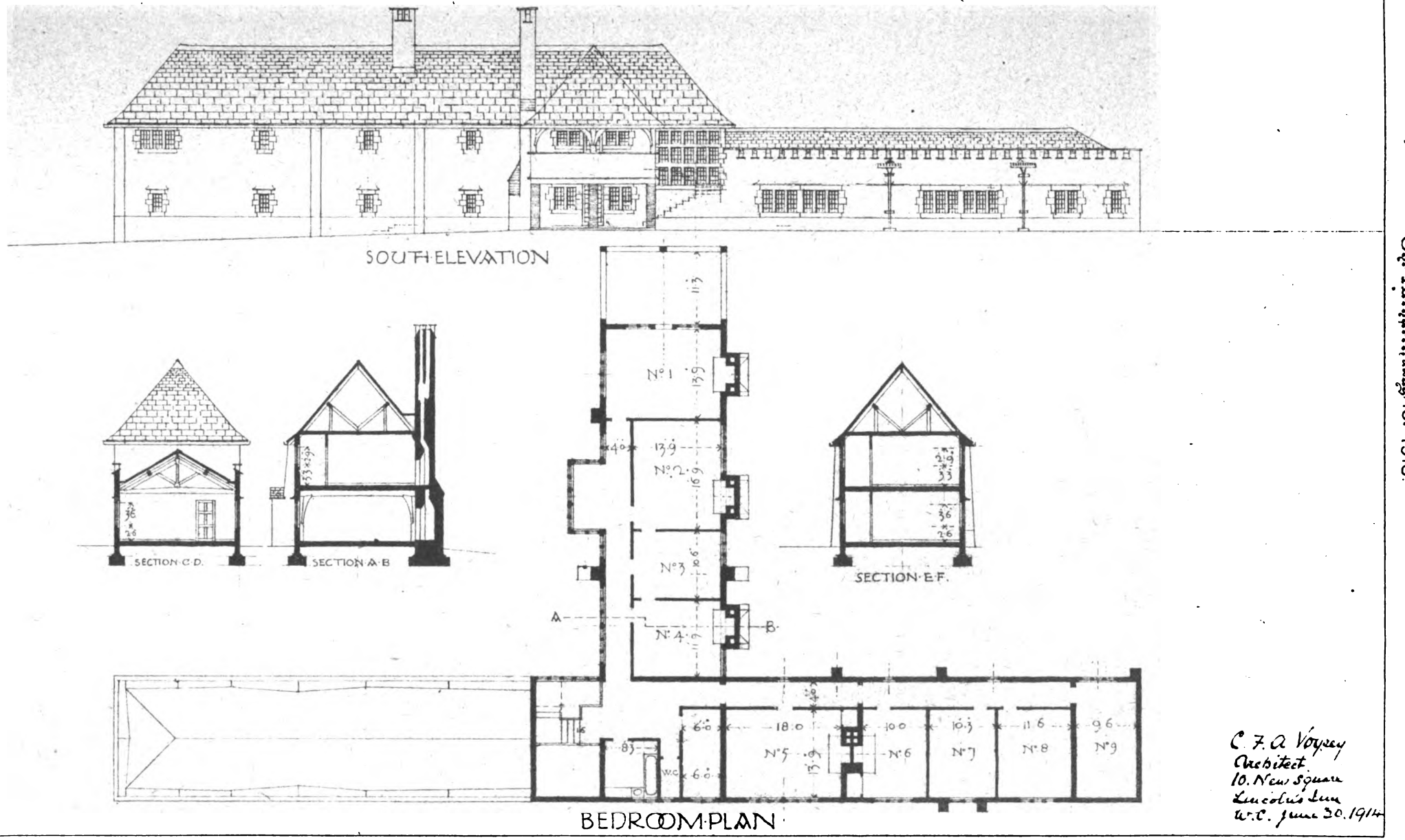
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IFFE. THE DINING SALOON.

, F.R.I.B.A., ARCHITECTS.

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SECOND SCHEME FOR HOUSE AT HATCHAM, COLD ASH.

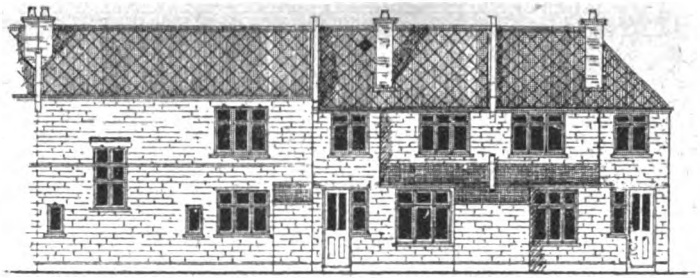
MR. C. F. A. VOYSEY, ARCHITECT.

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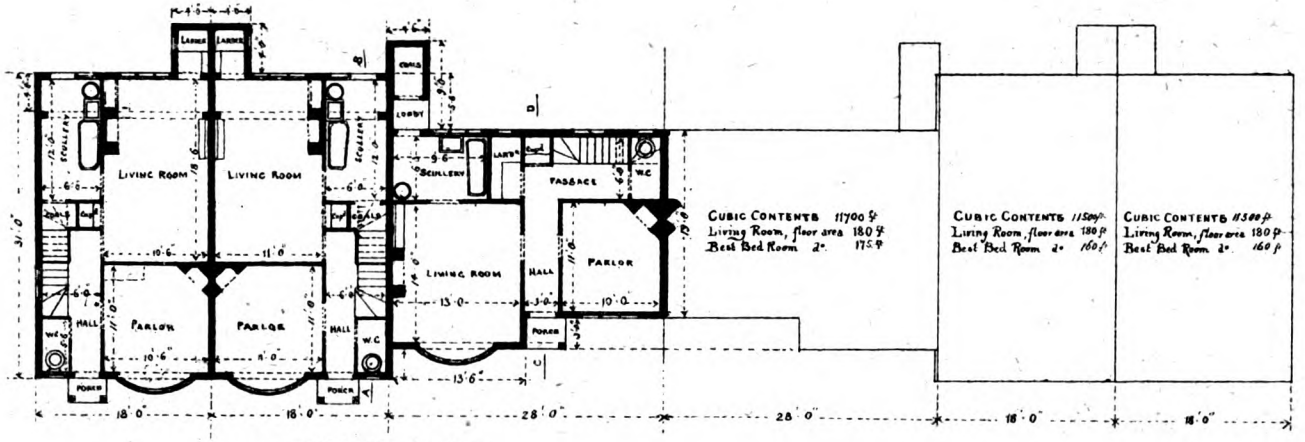
WORKING CLASS. COTTAGE COMPETITION. CLASS. B.



— FRONT ELEVATION —



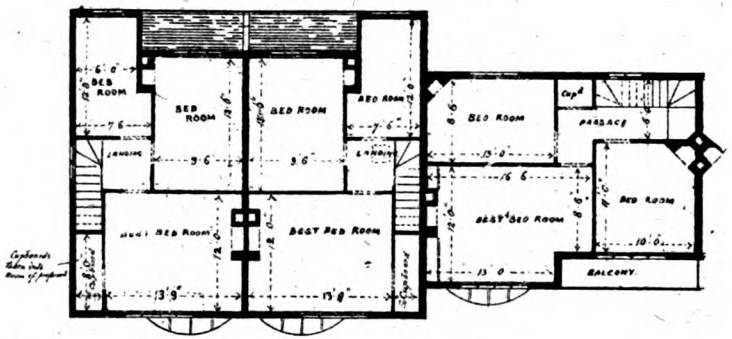
— BACK ELEVATION —



— GROUND FLOOR —

Party Walls and where shown in front Elevation to be in brick other external walls in Concrete Blocks. Roofs with Patent Tiling, Concrete slab partitions. Combination stove and range with Back Boiler and oak joinery, wood floors to grooved V Joyed oak and varnished and Quarry passages to domestic offices

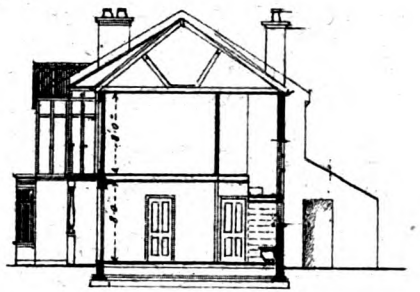




— FIRST FLOOR —



— SECTION AT A.B. —



— SECTION AT C.D —

Scale of Feet.

F. NESBITT KEMP
Architect & Surveyor.
14. FEATHERSTONE BUILDINGS, W.C. LONDON.

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WORKING CLASS COTTAGE COMPETITION. CLASS B.

MR. F. NESBITT KEMP, ARCHITECT.

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wood, which thus becomes a source of methyl alcohol, formalin, acetic acid, acetone, and charcoal. In countries having feeble supplies of coal this same process can be made to yield illumination and power. Other problems concern the most economical manner of using waste wood directly as fuel.

In connection with several lines of investigation, mention has been made of the utilisation of waste wood, and in order to illustrate the fact that this alone represents a problem of national importance I will mention that in this country there is one single wood-using establishment in which the normal annual loss or wastage of timber represents a sum approaching £20,000.

For the purpose of demonstrating what the British Empire has done and is doing in the way of forwarding technical knowledge relating to timbers, I will compare its activities with those of two other great Powers, the United States and Germany.

Although France produced the first model investigations on the mechanical properties of wood, Germany in recent times has done a great volume of excellent work and correlated the results with the structure of timbers concerned. Along the two lines she has been ably seconded by Austria, and these two partners have conducted minute and detailed research on timber-structure from the point of view of identification. To Germany more than any other country we owe our modern knowledge of the fungi inducing decay in timber, and on modern antiseptics for combating them. Germany, together with Austria, has largely contributed to the development of the technical art of changing the colours of woods by chemical means and by dyes. Her work on the utilisation of wood as a fibre material, as fuel, and by destructive distillation has given to her the leading place in these fields.

Germany has, in addition to her forestry schools various institutes from which emanate the results of researches in the various branches of the subject. And the State has founded, staffed and equipped, an institution whose sole function is to investigate the problems of the decay of timber and its prevention.

Germany thus spends thousands of pounds annually on timber investigation. She also promotes the use of her colonial timbers by this means, and by describing or referring to them even in small text-books.

The United States has produced many valuable results on the mechanical properties of North American timbers, and on technico-practical questions concerning American woods as sources of fibres and of chemical bodies. Her workers have also published much detailed original information on the structure and identification of the indigenous timbers. While in one branch, that of artificial seasoning of wood in kilns, the United States leads the world in original investigation and practical invention.

Apart from possessing some forestry schools, the United States has one institution specially founded for the investigation of timber problems, namely, the Forest Products Laboratory, at Madison. I believe that the annual sum paid for researches in this laboratory exceeds £40,000. This laboratory works in close touch with men engaged in the timber trade. And the timber trade journals published in the United States give, by the very nature of their articles, sufficiently clear evidence of the intimacy of the relations between wood industries and technical science.

Great Britain doubtless was handicapped by the lack of any great forests that should stimulate research of the highest type on the mechanical qualities of timbers. First-class original work up to modern standard has never been produced in this country on this branch; the work done has been narrow in scope, because done by engineers, who even to-day are profoundly ignorant of the basic facts on the subject of wood-structure. The sole comprehensive modern researches on the mechanical properties of wood conducted in the British Empire emanate from Australia. In regard to the structure of timber this country has contributed little, except fragments concerning colonial woods But in India Mr. Gamble has produced a great work on the macroscopic structure of Indian woods. Although England at the outset led the way in providing antiseptics and means of injecting them into timbers, her original scientific activity in this direction ceased decades ago; while as regards the investigation of the fungi causing decay in timber our Empire has done practically nothing.

Altogether, famous as this country has been in the past from the practical standpoint as regards timber, she has been a nonentity as a contributor to the scientific technology of wood. The time has passed when it is safe to continue such a policy.

In the United Kingdom, although there are some incipient schools of forestry, and there is a professor of the technology of woods at the Imperial College, the State neither maintains any technical authority on timber in its employ nor devotes any sum to research on the subject. The timber industries likewise have no technical consultants nor do they subsidise research. Hence, where the Governments of the United States and Germany spend annually thousands of pounds on timber-research conducted by specialists, our Government spends not a penny, though the wood imports amount in value to more than forty million pounds sterling annually. The Forest Research Institute in India, and Forests Products Laboratory in Canada represent the official provision made by the British Empire for the investigations on woods coming from forests that are larger in extent and variety than those governed by any other State in the world, and whose value must be reckoned in hundreds of millions of pounds.

But there are signs of awakening as regards research. The awakening is Imperial, not merely national: and this is of vital importance because this country and the remainder of the British Empire should be linked together in policy as regards the great timber problem of the future, and therefore linked together in attacking the problems whose solutions will dictate that policy and will indicate the best method of utilising our common timber resources. In this country and in Australia, departments of scientific and industrial research have arisen, and it is to be hoped that the great trades will also take part in this forward movement, for the greatest advances can be achieved solely by the co-operation of the State, the trade, and the technical specialist—and this is especially true of the great timber industry.

CONCRETE SHIPBUILDING NOTES.

By L. G. Mouchel and Partners.

Reports from the various ferro-concrete shipyards in England, Scotland, and Ireland show that good progress is being made in the construction of 1,000-ton sea-going barges for the Admiralty Department of Merchant Shipping. As vessels of this class are urgently required, the building of steamtugs, and the fleet of six 1,150-ton cargo steamers—designed for private ownership by the Ferr-concrete Shipbuilding Co., of Barrow—appears to be going on less rapidly for the time being. The programme of construction already authorised comprises about 220 barges and other vessels, representing some 200,000 tons of shipping, and a capital outlay estimated at nearly £4,000,000, apart from the cost of land and shipyard plant. On the basis of the designs adopted, the saving of steel is fully 70,000 tons of the quantity that would be needed for steel ships of the same carrying capacity, and it is believed that a still larger saving will be effected when practical data become available as to the minimum proportion of reinforcement that may be employed with safety.

The United States Shipping Board have not advanced quite so rapidly as our own Admiralty, and according to the latest advices have only two concrete shipyards ready for operation, as compared with nearly twenty in the United Kingdom. On the other hand, it must be

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Brugge-Zeehaven

A RETROSPECT AND A FORECAST.

The History of Zeebrugge in brief, from the Origin of the Movement for its Creation.

By JOHN A. RANDOLPH,

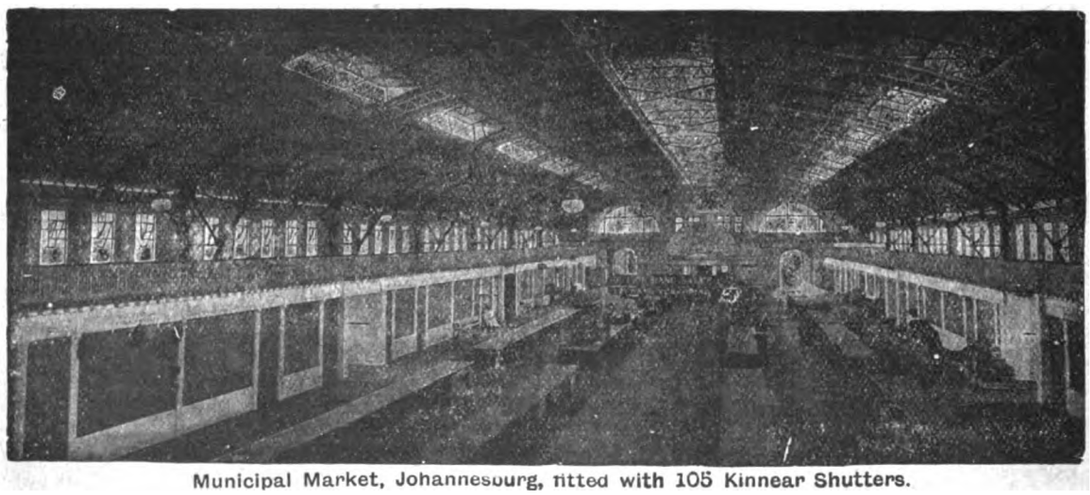
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recognised that America is to be credited with the completion of one ferro-concrete steamship of 7,500 tons displacement, a courageous experiment which has been amply justified by the behaviour of the vessel on her trial trip and during subsequent voyages. Moreover, the Shipping Board have committed themselves to the construction of fifty-eight additional concrete ships of 7,500 tons capacity, and these are to be constructed in Government yards, some to be established on the Pacific coast, and the remainder on the Atlantic and Gulf coasts. According to official estimates, the cost of wood, steel, and concrete hulls is £30, £35, and £25 per ton respectively. Hence the programme of the U.S. Shipping Board represents an outlay, on hulls alone, of about £10,875,000, on the basis of 435,000 tons of deadweight capacity. The conservation of steel will probably exceed 125,000 tons, and the saving in the cost of the vessels according to the official estimate will be £4,350,000; this being the difference between the cost of concrete and steel hulls. At the present time only two of the Government yards have been decided upon, one of these being at San Francisco and the other at Wilmington on the Atlantic coast. Therefore the United Kingdom is still ahead in respect of the number of ferro-concrete shipyards at work and in the tonnage under construction. It may be hoped that the Admiralty may find it possible to arrange for an early extension of the British programme.

The evidence obtained by the U.S. Division of Concrete Ships as to the durability of concrete in sea water is necessarily limited by the duration of the investigation or the age of the structures examined, and does not in any way set up three years as a maximum period of freedom from damage by sea water. In fact there is no doubt on the part of those competent to judge that really good concrete will last as long in sea water as on dry land. Let us assume, however, for the sake of argument, that after three years of service a ferro-concrete ship would have suffered some damage. In that case, some local repairs or patching might have to be carried out, and the ship would then be good for three years more without maintenance. On the same assumption, a similar process would follow on the termination of every third year, thereby ensuring the practically unlimited life of the vessel. There is really nothing prejudicial to ferro-concrete in such a prospect, for as everyone knows steel ships require much more frequent attention, and the annual cost of maintenance, scraping, and painting would far exceed that involved by the triennial overhauling of a ferro-concrete ship. Therefore the structural and financial advantages of ferro-concrete shipbuilding would still remain, even assuming the existence of the unfavourable conditions stated.

Having regard to the doubts which have been expressed as to the capability of ferro-concrete ships for the resistance of stresses due to rough weather at sea, it is interesting to note the satisfactory behaviour of the 5,000-ton steamship "Faith" launched early this year at San Francisco. The trial trip, covering a course of about 40 miles, took place in May last, when the vessel was found perfectly watertight, entirely free from vibration at full speed, and answered the helm with great readiness. Moreover, with new engines and machinery, a speed of over 10 knots an hour was made instead of the estimated speed of 9 knots. The favourable opinions formed by the company of engineers and shipping experts on the occasion of the trial have been confirmed by subsequent voyages in actual service. During the first of these, a telegram dated May 29 was sent to the owners in the following words:—"Concrete steamer 'Faith,' six days out of San Francisco with full cargo reached Seattle yesterday afternoon, on her way to Vancouver, after one of the roughest coast voyages recorded. Eighty mile gale, waves thirty-five feet high. Everything in perfect condition. Captain and Government officials aboard expressed themselves as follows:—'"Faith" acted as any other good ship of wood or steel, and with absolutely no vibration.'"

We understand that the vessel has since been on trips to Honolulu and New Zealand, and has fairly started on a career of much usefulness, which it may be hoped will act as an incentive to the British Department of Merchant Shipping to extend widely their present admirable programme of concrete shipbuilding.

NOTES ON BOOKS.

As I peruse the pages of this fascinating book,* some lines of Russell Lowell's persistently recur to memory, bearing a message fully in accord with Mr. Spooner's:—

"Earth has her price, for what she gives us;
The beggar is taxed for a corner to die in;
The priest has his fee, who comes to shrive us;
We bargain for the graves we lie in.
In the devil's mart all things are sold,
Each ounce of dross costs an ounce of gold;
For a cap and bells our lives we pay,
Bubbles we earn with our whole life's tasking.
'Tis only God, who is given away,
'Tis Heaven alone may be had for the asking."

There within the compass of ten lines we find crystallised what Mr. Spooner, with some degree of detail and with great lucidity, enlarges upon in his book, though he has a different view-point in his mind. But waste—the avoidance of waste—is the key-note, and it is truly saddening to read of what we, as a nation, have lost in the past, and to think what leeway we have to make up. It always irks me to find uncomplimentary comparisons instituted between the United Kingdom and other nations; but what is the use? If, as Mr. Spooner can and does show, statistics prove that we have acted or failed to act in such and such a way, involving our commercial backsliding, it is taken out of the realm of good or bad compliments and it becomes necessary to face unpleasant fact. In a series of chapters he produces evidence to show how, as a nation, we have woefully wasted time, health, life, food, fuel, and opportunities. Other nations may have erred also, but to a far less extent than we ourselves.

England has been committing the fatal mistake of living upon Capital, and this she has been enabled to do by reason of her acquired properity, without its danger having become too apparent hitherto. The old Chinese method of burning a house in order to roast pork is too extravagant and provokes contemptuous laughter, and yet it would seem that England has been pursuing such a policy.

It is not, thank Heaven, too late for us to amend. The war, so disastrous from many aspects, has yet taught us the sin of waste, and also the latent forces in us enabling us to make the most of everything. If only we will learn the lesson, not just for the period of the war, but for all time! What an era of prosperity is foreshadowed if we will but see to it that for each ounce of dross there's an ounce of gold. And not merely for the sake of prosperity, but for the nobler reason that, in making the most of and the best of everything, we shall be bringing God's kingdom far nearer to us than all the sermons of all the Churches can ever expect to do.

In view of the undoubted revival in the study of art it is interesting to note that a work will shortly be published on "Studies of the Human Figure," which aims at affording a varied series of photographic representations of poses and attitudes for the reference of designers and artists. The work is the joint production of Mr. C. Montague Ellwood, the well-known artist and designer, joint editor of "Drawing," and Mr. F. R. Yerbury, of the Architectural Association, who is responsible for the photographs. The book will be issued immediately by Messrs. B. T. Batsford, Ltd.

* **"Wealth from Waste." By H. J. Spooner, C.E., F.G.S. (London: George Routledge & Sons, Ltd. Price 7s. 6d. net.)**

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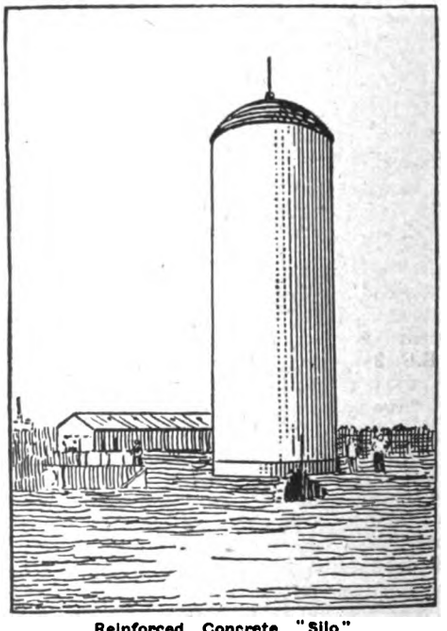
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THE ARCHITECT

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FORTHCOMING EVENTS.

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TRADE AFTER THE WAR.—III.*

In our last two issues we illustrated from the Reports of the Departmental Committees appointed to consider the position of certain trades after the war the disastrous consequences of the policy of so-called Free Trade upon our commerce and industry, and the very different results of the opposite policy pursued by Germany. In this article we propose both to deal with some of the suggestions made in those Reports for the re-establishment of our trade and of the military strength of the Empire, and to add some suggestions of our own.

It is quite obvious that there must be a transition period between the conclusion of the war and the return of normal conditions; and it is obvious that we must not allow our enemies during this transition period to re-start that machinery of penetration which they employed before the war. Our commerce and industry must have a breathing space to accustom them to the new conditions. Therefore we find that all the reports advise the exclusion of enemy products for a period after the war; and in the Report on the Electrical Trades the wise counsel is given that we must be careful to see that the enemy does not import his goods under a neutral disguise from those neutral countries in which during the war he has been pursuing with increased energies his policy of penetration. Moreover, it appears to us that if we are to keep the world's supplies of raw materials for ourselves and our Allies we must continue to ration very rigidly those neutral states bordering on Germany through which Germany is obviously hoping to get supplies; and such supplies as we allow them to get we must let them get through the neutral traders who have been our friends during the war, and not through those traders who have helped the enemy. This policy should be at once announced in order to diminish the numbers of those neutral traders who are at present engaged in the business of supplying the enemy.

We must begin now, and during this transition period we must continue to take measures to adapt our trade to the new conditions. To effect this we need fundamental changes in political conditions, in financial and commercial conditions, and in industrial conditions.

Of the changes in political conditions the three most important are a proper recognition of the relation of commerce to national defence, a proper organisation of our consular service, and a change in our fiscal system. All these Reports emphasise a fact which has been almost forgotten in the years before the war—the close relation of commercial legislation to national defence. All these trades have intimate relations to this fundamental consideration; and we think that it would be well if a department of the Naval and Military Intelligence were organised which would scrutinise carefully from this point of view all changes in commercial legislation, and make its views heard by Parliament. Obviously, too, we must reform our Foreign Office and our consular service. Indeed we are not sure that the best preparation for the commercial war after the war would not be to retire compulsorily a large number of the higher officials of the Foreign Office and the Board of Trade and replace them by men of the type of Mr. Hughes of Australia. That we need a change in our fiscal system which will enable the raw materials produced in the Empire to benefit primarily the citizens of the Empire is admitted now by all but an insignificant majority. But, if we introduce some form of Protection, we must be careful to guard against an evil which unregulated Protection is apt to bring in its train. There is no doubt that a tariff tends to favour the attempts of trusts and rings to raise prices above their proper level; and the better organised our industries become the more this danger will be accentuated. We would suggest that the best way of meeting this evil would be to distinguish between tariffs imposed for revenue and tariffs imposed for Protection. We would leave the imposition of the former to the House of Commons, but trust the imposition of the latter to a strong quasi-judicial body, acting much as a private bill committee now acts. The industry which claimed protection would appeal to this body, anyone who could show a proper *locus standi* could be heard on the other side, and the Attorney-General could represent the interests of the public. In this way we think that the temptation to indulge in log-rolling and corruption which the manipulation of a tariff holds out to a large representative assembly would be to a great extent avoided.

To effect changes needed in financial and commercial conditions we must, to some extent, borrow from the devices which our enemies have proved to be successful. Our banks must be more ready to finance native industry. Combinations among manufacturers engaged in the production of similar articles must replace cut-throat competition. There must be more standardisation of products, a greater readiness to employ and use the learning and discoveries of the scientific researcher, a greater readiness to adapt products to the needs and tastes of foreign countries. There must be a better arrangement and co-ordination of transport facilities. But, though to some extent we shall borrow some parts of the new financial and commercial organisation from our enemies, there must necessarily be one great difference. At no time would the world of trade have been willing to assign to the State the dominant part played by the German State, and less than ever now that it has been experiencing the qualities of State control. The qualities of initiative and independence, which are partly the cause and partly the effect of our historic system of self-government, which have made us the most successful colonisers of any people in the world, must not be suppressed. But they must be regulated. Unregulated as they were before the war, they led, under the democratic conditions of the present day, to anarchy in politics, in commerce, and in industry. The State must have a policy. It must lay down the broad conditions under which trade and commerce are to be carried on—conditions which are needed to secure national defence, the health of the nation, the prosperity of commerce at home and abroad, the conditions under which both capital and labour can get a fair remuneration for their services, and a machinery for the settlement of industrial disputes. All these matters must be settled by laws which must be rigidly enforced on all classes of the community, masters and men alike, and on all combinations of traders and workmen. Within these limits each trader should be

* Reports of the Departmental Committees appointed by the Board of Trade to consider the position after the War of the Iron and Steel Trades, the Engineering Trades, the Electrical Trades, and the Textile Trades.

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left to conduct his business as he pleases, in competition with his rivals at home or abroad. To a large extent this will be a return to the polity under which our industry grew and flourished in the seventeenth and eighteenth centuries. It will be a return to the days before the shallow generalisations from the transient economic conditions of the middle of the nineteenth century had created those dogmas the questioning of which the Free Trader resents as bitterly as the most bigoted theologian resents an attack upon the most mysterious and incomprehensible articles of his creed.

Lastly, there must be a change in industrial conditions. The regime of party politics, in which each party bid for the favour of a constantly extending electorate, had, in the years before the war, produced a state of things in which "all were for their party and none were for the State." This had re-acted upon the industrial problem. Each party sought to bribe labour to secure its votes, and therefore little or no impartial consideration could be given to a problem which demands above all others a judicial and impartial consideration. Any kind of solution was favoured which seemed likely to raise a good election cry; and the guidance of the policy of the State too often passed into the hands of those self-styled intellectuals who tried, with the help of a few tags of political philosophy imperfectly understood and much fluency of pen and tongue, to supply the place of the practical wisdom on which all true statesmanship is based. They corrupted public opinion until all sense of the fundamental truths upon which the life and the health of the State are based was lost.

Exceptions in favour of so-called conscientious objectors, and enactments like the Trades Disputes Act, are illustrations; and opinions which led to Bolshevism and anarchy were tolerated if it was thought that electioneering capital could be made out of them. This diseased state of public opinion must be changed. The State, as a condition precedent to the settlement of labour difficulties, must educate its members in those elementary duties of a sane patriotism to which we have been rudely recalled by the stern discipline of war. It should no more tolerate teaching which leads to the weakening of the authority of the State over its members than it tolerates teaching which incites to crime; for such teaching is a crime; and the State which tolerates it is on the broad road which leads to destruction. Unregulated toleration of opinions dangerous to the State is, in a democracy, more dangerous even than unregulated Free Trade. Opinion should no doubt be free just as trade should be free—but only within the limits needed to secure the health and strength of the State.

Under the old régime such offences as "sedition, privy conspiracy and rebellion," were looked on with a tolerance which made them more and more of a menace to the security of life and property. We may remember that in the Litany these offences are coupled with "false doctrine, heresy, and schism"; and, though the words have a theological ring, they embody a profound truth. The modern name for doctrine is propaganda; and the power of propaganda is beginning to be realised by us very late in the day. As Mr. Balfour explained in the House of Commons a week or so ago, it was the poisonous propaganda—the false doctrine—upon which the Germans have been brought up for the last forty years which has made them a set of barbarians with whom it is impossible to treat till its efforts have been eliminated. As we can see now, it was the unregulated propaganda of self-interested party politicians which was fast sapping the foundations of our English State. After the war we may hope that the State will see to it that it makes use of a propaganda which will teach all its members the meaning of those ideals for the sake of which we and the Americans have entered this war. As in the sixteenth century the modern State introduced law and an orderly civilisation by causing its sovereignty to prevail over those disorderly feudal principalities which distracted the members of the State by false loyalties and false codes of honour, so in the days after the war the English State must cause the sovereignty of its ideals to prevail over those false loyalties and anarchic opinions which it permitted and even encouraged in the days before the war. When this has been accomplished we shall have more than half settled those industrial difficulties which before the war were endangering the stability of the State; for we shall have eliminated that atmosphere of unnatural suspicion engendered by half a century of that class and individual selfishness which the old political economy had raised to the rank of a virtue, and done something to substitute for it a desire to promote the general good of the body politic.

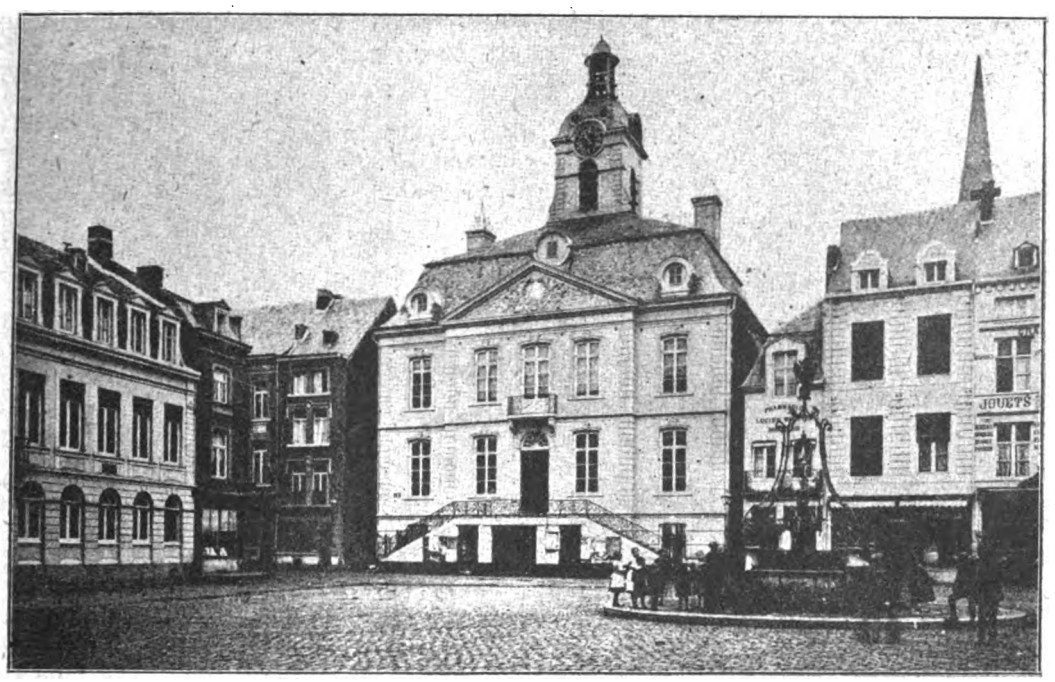
This idea has been very well expressed by Dr. Holdsworth in a Rhodes lecture which he gave last March at University College, London, upon the Relation of Commercial Legislation to National Defence; and, because we think that it contains the gist of the matter, we shall conclude this series of articles by a quotation from it:—"Unless the State can organise trade with a single eye to a national ideal, unless it can, in pursuance of this ideal, control impartially the conflicting claims of capital and labour, there can be no industrial peace. And without industrial peace the commerce of this country will never be able to take full advantage of those great new opportunities which we confidently hope that the issue of this war will bring. A long step in the direction of industrial peace will have been taken if the different classes which make up the nation can be habituated to look steadily at the good of the whole body politic, and not exclusively at their individual interests. If the sacrifices of this war succeed in teaching us the meaning of and the necessity for a patriotism which, in the years before the war, amid the disputes of parties and classes, had almost disappeared, they will not have been made in vain."

NOTES AND COMMENTS.

With reference to our leading article in last week's issue on "Trade after the War," a correspondent writes:—"The closing of the German Banks is, as you say, a triumph of common sense and indeed of patriotism. But it is by no means a triumph which ends the war against cosmopolitan finance directed from Germany. There are plenty of banks in Holland and other neutral countries which are very nominally neutral. They will be put up by their German masters to take the place of the German Banks, unless a careful eye is kept upon their activities. It is to be hoped that, if we get at the end of this year a really representative House of Commons, they will appoint a strong committee with power to call for any documents they require from the Foreign Office, the Foreign Trade Department, the War Trade Intelligence Department, the Trade Bureau of the Admiralty, and the Military Intelligence. Such a committee, with this evidence before it, and with the evidence it can collect from financial and mercantile experts in the City of London, should be able to devise measures and guard against German Banks in neutral disguise. Four years of war have made it pretty clear that no adequate measures to protect national trade and finance can be expected from our Foreign Office; for in all matters relating to German commercial and financial penetration it has adopted the attitude of the rabbit suddenly brought into contact with a boa constrictor." We think that our correspondent has reason; and we recommend his remarks to the consideration of the British Empire Union and other bodies whose attitude towards the boa constrictor is more calculated to deal effectively with that reptile than that displayed by any Government Department with which we are acquainted.

A scheme has been drawn up by Professor Baggi, of Turin, for the construction of a canal from Genoa to Lake Maggiore. The proposition is to cross the mountains on the direct line between the two termini by a tunnel twelve kilometres in length. This enables the canal to cross the watershed at a maximum elevation of 250

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HUY.

metres. A calculation of the water required to operate the canal, and of the supply available above the summit-level from the streams descending the inner versant of the mountains, shows that these would amply suffice for the needs of the canal and for all other purposes. The cost of making the tunnel is estimated at 7,000,000 lire per kilometre. After crossing the Lemme on the north side of the watershed, a second short tunnel would take the canal into the basin of the Scrivia, the further route being by Tortona to Bassignana on the Po, and thence nearly due north to Ticino below Lake Maggiore. Aqueducts would be required for the crossing of certain valleys, but would be of no very great length in the aggregate.

The annual Exhibition of the Royal Glasgow Institute of the Fine Arts is to be opened on Saturday, September 21.

Last week a solemn thanksgiving service was held in Amiens Cathedral, showing that the building has escaped the barbarity of the Hun. As a matter of fact from report we understand that the damage to this beautiful building has been very slight, although considerable damage has been caused to the buildings surrounding it.

At the Conference of Scottish Mine Workers in Edinburgh on Thursday of last week, the first resolution which was discussed dealt with housing, and requesting the Government to make the question of housing a national one. The new ideal home was one which consisted of four apartments with bath and garden.

Mr. Dalrymple Maitland, Speaker of the Manx House of Keys, has presented to the town of Douglas, Isle of Man, fifty-eight pictures by the late John Miller Nicholson, the Manx artist.

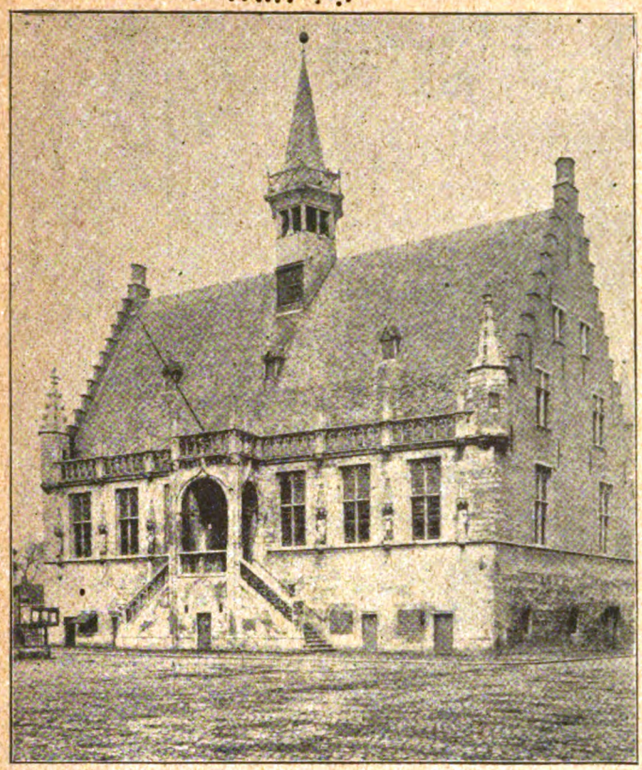
Following the question of the Channel Tunnel, the project of a tunnel between Great Britain and Ireland is again occupying attention. The question came up some years back, and the route then favoured was from Portobello, Wigtownshire, to Island Magee, co. Antrim. Taking this route the total length would be about 35 miles, of which 25 would be under the sea. The proposition was that there should be two lines of railway under the sea bed linking up with the British and Irish railways.

The report for six months' work of the Industrial Reconstruction Council to June 30 has just been issued, and shows that considerable progress has been made with the movement towards a system of self-government for industry.

It may be said that there is no trade that is not discussing, if only in a preliminary or unofficial way, its relation to the Whitley Report, and hardly any trade that has not accepted its underlying principles. The work of the Ministry of Labour in promoting Joint Standing Industrial Councils, and of the Ministry of Reconstruction in connection with Industrial Reconstruction Committees, appears to be reaching out over the whole range of industries, and the prospects of the early establishment of a general joint advisory system for Government purposes seem to be extremely bright. So far as the trades themselves are concerned, it is obvious that the driving force behind this movement is a feeling of the need for organisation and co-operation with labour in order to gain strength for the work of the reconstruction period. In this connection the Council notices with regret a tendency among employers in certain quarters to restrict the function of joint bodies to what are known as "Labour questions." These employers in our view fail to realise the added strength which they could secure by co-operation with labour in any future discussion as to Government activities in connection with their trade. The Council has issued a manifesto (I.R.C.4.) dealing with this point, and claiming that the Government should in all trading matters consult only joint bodies. If discussions are confined to "Labour questions" the main object of the Joint Industrial Councils will be sacrificed. It may be said of the campaign that it is almost free from any serious opposition. The difficulties that it has to encounter arise rather from ignorance than from any other cause. There is still a great deal of work to be done in the education of the public as to the true needs of industry and the real functions of Industrial Councils, and this is work to which the I.R.C. is devoting its whole energies and attention.

The close of the war will mean an enormous activity in the building trades, provided employer and workman can work in harmony. The probability of unemployment is remote, and any form by which master and man may be brought together for their mutual benefit will be warmly welcomed by us. In this movement we see great possibilities, and therefore we have unstintedly advocated the scheme at every opportunity.

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DAMME, NEAR BRUGES.

ILLUSTRATIONS.

CHARLWOOD, EPSOM.

The house occupies a very fine position overlooking the downs. All the rooms face south-west or south-east. The whole of the woodwork except the staircase, which is oak, is treated with Solignum wax polished; all the internal plaster is distempered with Duresco. The house was erected by Messrs. Eberett; the bricks and tiles were supplied by Messrs. Lawrence; the ranges and stoves, Messrs. Scott, Morton & Co.; the baths and sanitary ware by Messrs. Doulton. The house was designed by Messrs. Hatchard-Smith & Son, 6 Duke Street, Adelphi.

RECEPTION ROOM, DYERS' HALL, DOWGATE HILL, LONDON.

FOURTH SCHEME FOR HOUSE AT HATCHAM, COLD ASH, BERKS.

WORKING CLASS COTTAGE COMPETITION.– CLASS C.

PROFESSIONAL ETIQUETTE AND ADVERTISING.

What we term professional etiquette is a code of custom which is sometimes inapplicable to the conditions of modern life, and should in the interest both of mankind and of public morals be simplified by the elimination of what is unnecessary.

We should be very careful in laying down prohibitions to consider the effect of the normal instincts of humanity, for if we run counter to them we shall not be able to make prohibitions effective, but shall be placing a premium on hypocrisy and cant to the detriment of what is fundamental and vital.

In all of the professions the established and recognised etiquette might with advantage be simplified, and this applies to architecture as to medicine and law.

Some years ago the Royal Institute of British Architects had under consideration a proposed code of ethics, a provision of which was that no architect should ask the help of a friend in order to secure a commission.

If we acted on such a prohibition it is evident that the man who had friends would be placed in a position of relative disadvantage similar to that of an athlete whose right hand is tied behind his back, while it is quite evident that a large number of men would outwardly acquiesce in restrictions which they would disregard when it suited their purpose. The Institute, which wishes to encourage the public appreciation of architecture, forbids its members to place their names on the hoarding of a building which is in a state of erection, though it encourages them to affix their names to a completed building. And yet we all know that for one man who studies a complete building a dozen stop to look at a building which is being built. We could understand a regulation binding architects to the use of a form of lettering of uniform size and character on hoardings, but consider the prohibition of the practice to be unsound and unreasonable.

Architects in America and in our Dominions are allowed to insert simple professional announcements giving their names and addresses in the daily papers, but such a practice is discountenanced here. In this country it probably makes little difference to the architect, as few people needing an architect's services would have recourse to the daily Press to find the names and addresses, but the practice in itself seems unobjectionable so long as the announcement is a simple one and not comparable to the advertisement of a patent medicine.

The question of payment for services rendered in the introduction of a commission to an architect is a much more difficult one. If a man is in a position of trust, or is paid for advice, it is clearly an immoral and fraudulent act to offer him any consideration for giving certain advice. But there are many cases in which an engineer, surveyor, auctioneer, or estate agent is in a position to recommend an architect to a client. Frequently such a recommendation will be made as a matter of friendship and without thought of ulterior considerations, but even if this be so the architect will naturally wish to repay a service and will try to do so if chance permits. But in other cases the action will arise merely from feelings of friendship, and the man who renders it may stipulate for a share in the architect's fees. If he has, as frequently happens, recommended the best man he knows, his action is clearly perfectly honest if not altruistic. Is there any reason in such a case why the architect—who desires to carry out the work and whose fees and services will be the same in either event—should indignantly refuse to be a party to the transaction? If he does he may be throwing away an opportunity which, as a young struggling man, is important to him. We say it is hard in such a case if the architect is forced to choose between ignoring professional etiquette, or, on the other hand, losing a valuable chance and offending a man who has shown a disposition to help him. As human nature is he will probably share his fees and say nothing about the transaction, even going so far as to deny it if he is charged with having done so. The result is not to produce a high standard of professional ethics, but the establishment of a system of evasion and deceit.

We may freely admit that the architect whose position and standing enables him to dispense with any extraneous assistance in obtaining work is a more dignified and imposing figure than his colleague who acts under the spur of necessity, but we should reduce professional etiquette to the smallest and simplest dimensions, and not forbid practices which are perfectly honest and which are almost, if not quite, inevitable under certain conditions. Our code of ethics should be one which any good business man can understand, for an act is either moral or immoral, and we do not make the path of the professional man easier by adding to what the world can recognise as evil a series of wholly hypothetical and imaginary offences.

Excepting transactions between close personal friends and relations there is almost always a consideration implied or openly acknowledged in most transactions between human beings, and it does not very greatly matter what form that consideration takes; it is chiefly a matter of taste, good breeding and understanding.

If we receive work from a solicitor and nothing is said he may well feel annoyed if we place our legal business in other hands, and the broad principle of reciprocity

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probably forms the basis of a majority of the transactions in which the architect is concerned. All we can say is that the better the type and position of the parties the more they take each other on trust and the less reason they feel for any formal agreement. Undercutting in fees is clearly wrong if one architect endeavours to obtain the work which would go to a colleague by so doing. On the other hand it should, we think, be open to any man to assess the value of his own services, and we could wish that many architects of standing would assess them at a higher figure and so make it easier for their less distinguished fellows to obtain the usual remuneration. But again it may be said, as Professor Roger Smith* once remarked, that the younger men do, in fact, give an amount of attention to their clients which their more fortunate fellows cannot and do not give, and so are actually being remunerated at a lower figure.

When we come to the question of advertisement we must not forget that it may be of two kinds, one more subtle than the other, and not for that reason less effective. The surgeon or physician whose gateway is marked by a red lamp at night advertises his calling, but the celebrated consultant in Harley Street, whose name appears on a small brass plate about the size of a visiting card, tacitly states that he is so well known that no other form of notice is necessary. A very able and distinguished architect well known in society once told us that he was informed by a lady that he was the most conceited man she had ever known, and when he asked why, replied that "I never see your name anywhere."

The architect may permissibly write a book on some subject because he is interested in it, but also because he knows that his professional reputation as a master of a specific subject will bring him clients.

He may also like the barrister take part in public life with the same dual object.

All we are urging is that it is in all our interests wise to recognise the complexity of the impulses which sway all human beings, and that unnecessary restrictions which run counter to wise impulses will be disregarded in practice. We shall not do good by attempting to force the individual to hide his light under a bushel, for he will not do it, and if we reduce the confining network of etiquette to its smallest limits we shall be in a far stronger position to enforce what is really necessary in the interests of the highest morality. Moreover, if we adopt a code which can be understood by all men, whether they are business men or others, we shall have behind us the weight of public opinion, which is a greater protection than a Chinese wall of complicated custom, because it is not in keeping with common sense. And lastly, the world would be a very dull place were every one forced to climb the same ladder of professional advancement, while we may add that the first rungs of the ladder would be badly overcrowded.

ROYAL NATIONAL EISTEDDFOD OF WALES, NEATH, 1918.

The following awards were made in connection with the architectural and town-planning competitions arranged by the Welsh Housing and Development Association under the auspices of the Welsh National Eisteddfod, 1918.

Lay-out plan of a Local Building Site.—Prize of 5*l.* 5*s.* given by the Welsh Housing and Development Association awarded to Mr. T. Gibb, Wigfa, Springfields, Aberavon. Total number of competitors, 7. Adjudicator, Henry E. Stilgoe, M.Inst.C.E., City Engineer, Birmingham.

Cottages and Living-in Quarters for Welsh Agricultural Labourers.—Cottages.—Class A.—Living-room, scullery and three bedrooms. Prize of 50*l.* given by the Right Hon. Sir Alfred Mond, Bart., M.P., awarded to Mr. J. Austin Lloyd, Bella Vista, Powfort, Annan, from amongst 83 competitors.

Class B.—Living-room, parlour, scullery and three bedrooms. Prize of 50*l.* given by Edward T. John, Esq., M.P., awarded to Mr. H. Heathman, 10 Station Road, Bristol, out of 52 competitors.

Class C.—Accommodation at the discretion of competitors, but with a minimum of three bedrooms planned mainly on one floor. Prize of 50*l.* given jointly by the Right Hon. Lord Boston and Sir Robert J. Thomas, Holyhead, divided equally between Mr. J. Austin Lloyd, Powfort, Annan, and Miss E. D. Blacker, 20 Victoria Square, Clifton. Number of competitors, 36.

Design for Living-in Quarters for Unmarried Farm Labourers.—Prize of 10*l.* given by Right Hon. Lady Boston, awarded to Messrs. Thomas & Morgan, Gelliwasted Road, Pontypridd. A consolation prize of 5*l.* 5*s.* given by Messrs. J. Cook Rees and D. M. Jenkins was awarded to Mr. Herbert L. North, B.A., F.R.I.B.A., Llanfairfechan, North Wales. Number of competitors, 25.

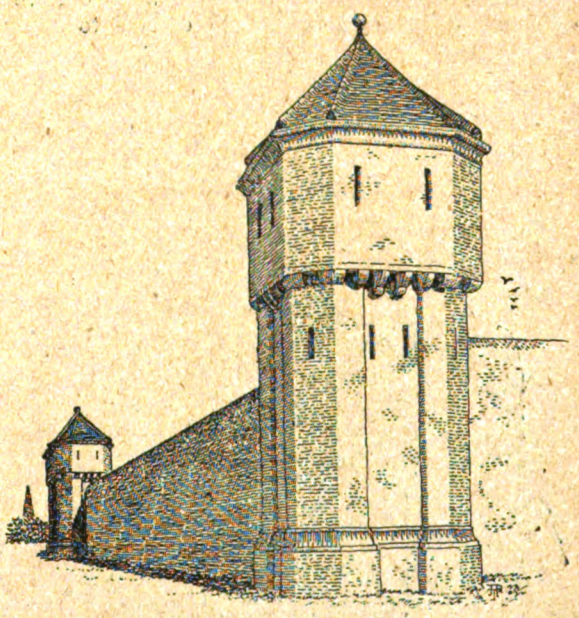
The adjudicators in the foregoing competitions were:—Professor Patrick Abercrombie, F.R.I.B.A., J. Cook Rees, Esq., M.S.A., President, South Wales Institute of Architects; D. M. Jenkins, A.M.Inst.C.E., Chairman, South Wales District Institution of Municipal and County Engineers; D. Lleufer Thomas, Esq., M.A., J.P.; the Right Hon. Lady Boston.

The plans were on exhibition at the Arts and Crafts Exhibition at Neath during the Eisteddfod week, and arrangements are being made to exhibit these in every county in the Principality. A selection of them will also be reproduced in book form.

GAZEBOS.

By the Late J. Tavenor Perry.

No name could be more descriptive than gazebo for a building, whether it assume the form of a tower or balcony, which was erected for the purpose of enabling anyone to gaze about; and there is no need to hunt through the pages of a dictionary for the origin of



WORMWOOD SCRUBBS.

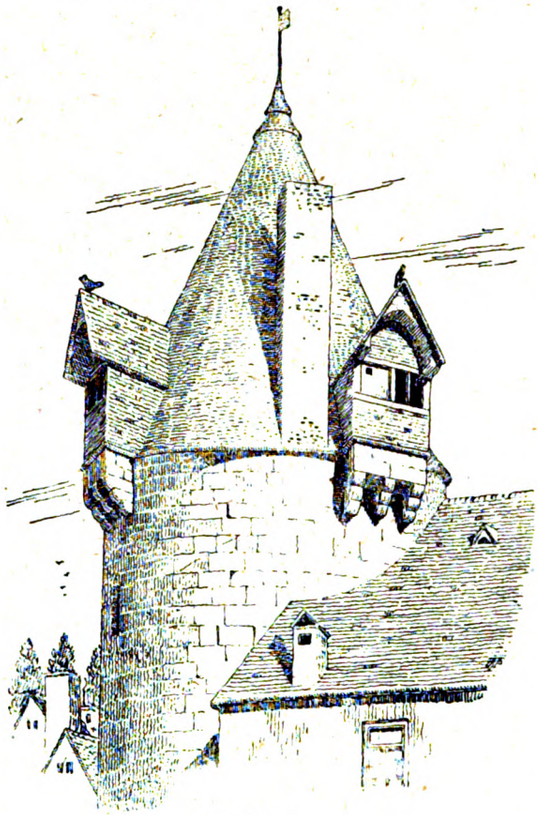
so obvious a term. Curiosity is common to the race, and contrivances of all kinds have been called for throughout the ages, and will continue to be, to enable people to pry into their neighbours' affairs; and architectural solutions of the problem must always be as interesting as they have frequently proved most picturesque.

Doubtless in the remotest antiquity such means of prying were in vogue, and the hanging gardens of Babylon may have presented replicas of the towers of Kent or Chambers; but we will go no further back for examples than Pliny's villa at Laurentinum. The Plinys, as we know, were of a very inquiring turn of mind, and are most appropriately commemorated at Como, their sup-

* Editor of "The Architect," 1869-70.

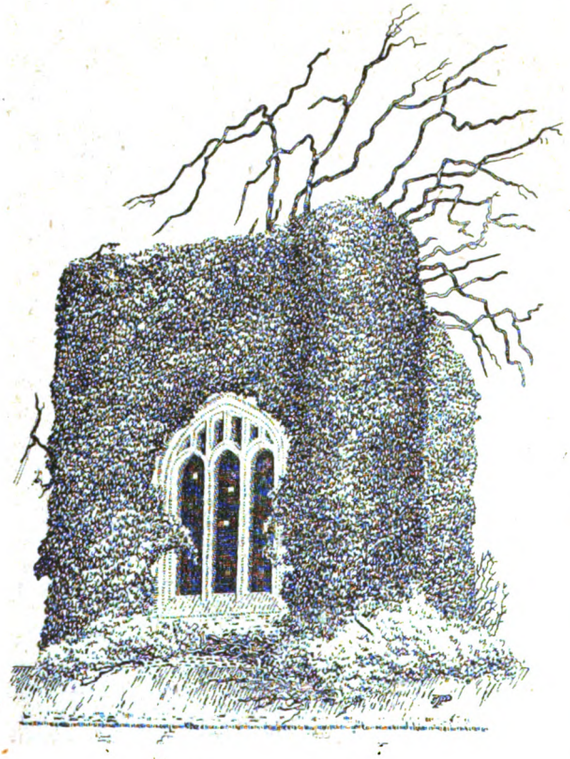
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posed birthplace, on the west front of the cathedral, by a sculptured representation of each engaged in looking out of a window. Thus it was that when Pliny the



ORLEANS.

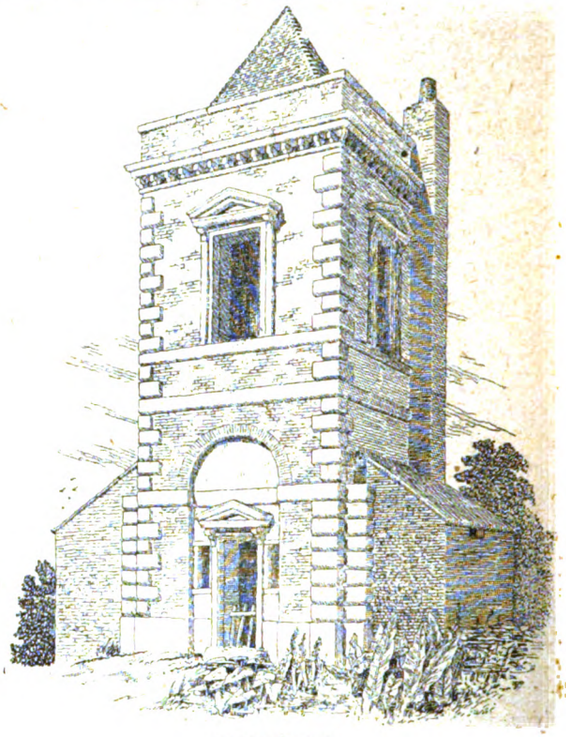
Younger built his celebrated villa he gave it two towers, and as they could be used neither for defence in such a place nor for smoking-rooms at such a period, we can only suppose them to have been erected to serve as



GUNNERSBURY.

gazebos whence he could look into the grounds of his neighbours and watch their incomings and outgoings.

The formal gardens of the Renaissance period, as depicted on the engraved drawings of Kip, Kniff, and others, had their mounds and lofty summer-houses whence the surrounding country could be surveyed;



ISLEWORTH.

but towers became a very marked feature in the later English gardens designed by Kent and his followers,

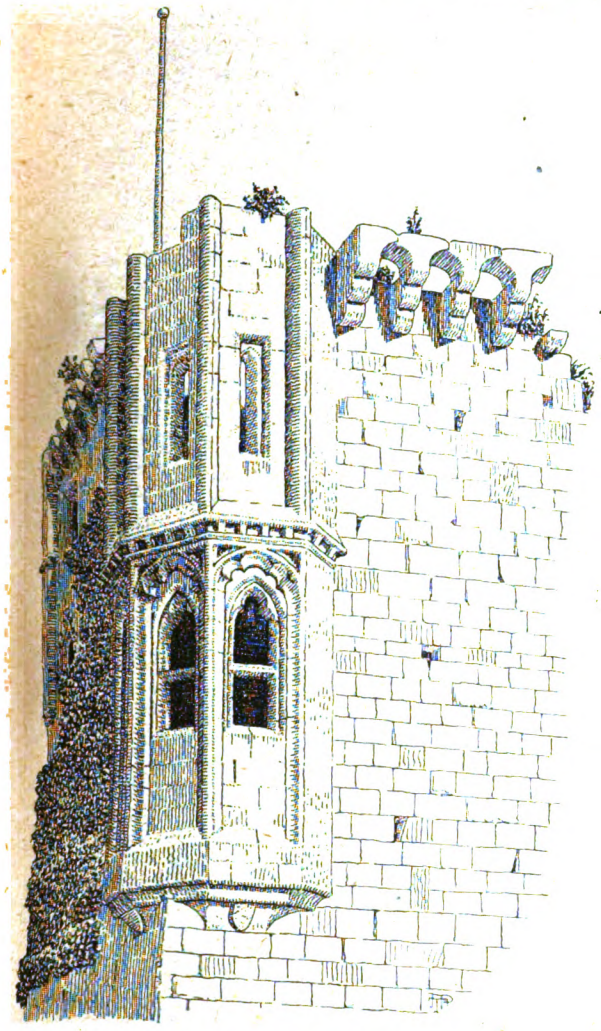


A GAZEBO, BOAR'S HEAD YARD, BRENTFORD.

who, as the Quarterly Reviewer says, in dealing with their work destroyed the terraces and ejected the statues of their forerunners, but "had temples, obelisks, and

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gazebos of every description " stuck about in the parks. And it was not only in England that these towers were found, for most people may remember the one standing in Marie Antoinette's Swiss farm of the Little Trianon, of which Laborde in his history of Versailles writes: " Cette fabrique de mauvais goût par sa petitesse et par son invraisemblance était un tribut qu'il fallait à la mode du temps. Il y avait dans presque tous les jardins, d'obligation, une tour de Marlbrook." And this tower



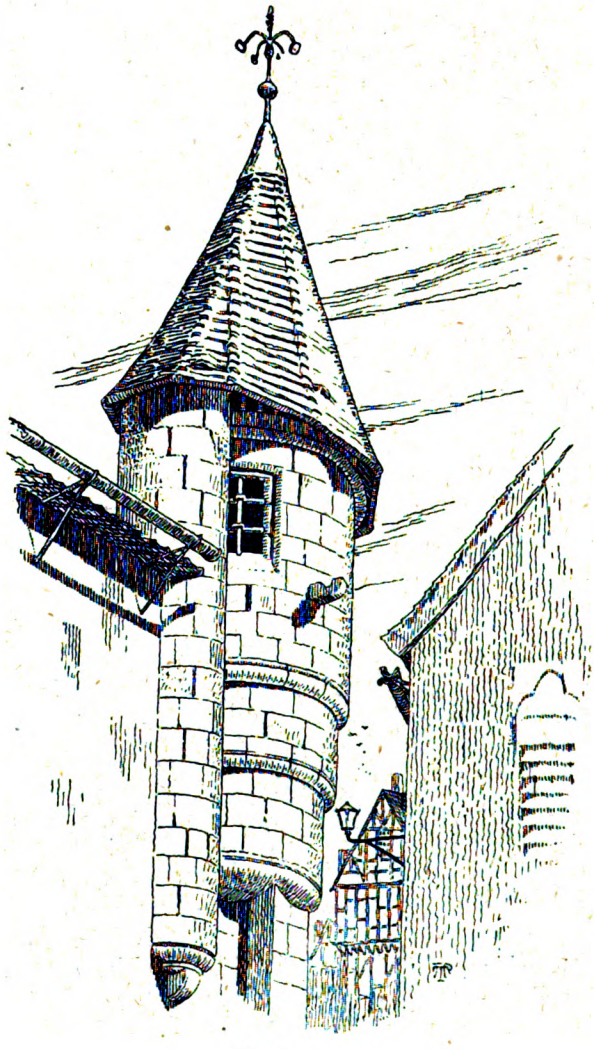
ASHBY-DE-LA-ZOUCH.

has been built in a sort of Moorish style, and may bear some fancied likeness to that from which " Sister Anne " watched for the coming of Bluebeard.

During the Middle Ages gazebos were a very important consideration in military architecture, and their variety in form and arrangement was infinite. Under the title of échauguette, Viollet-le-Duc gives a great number of these of a most dodgy character, providing at once facilities for looking out and protection for keeping out objectionable missiles, and in the castles of our own country many similar contrivances can be found. One example, from the half-destroyed keep of Ashby-de-la-Zouch (fig. 1) will suffice, which is of an extremely beautiful kind, and shows how the occupant of its little chamber was placed in a position not only to observe what went on within the walls of the castle, but to scan the country beyond.

But these military examples are all more or less of a utilitarian character, and are much less interesting than those erected merely to satisfy pure curiosity; and of the transference of the military forms to domestic use we have numerous and picturesque examples in the cities of Northern France, of which we give two specimens. These are from Orleans and Nevers. The former of these (fig. 2) is rather an adaptation of an older tower which has had dormer windows corbelled out from its roof on three sides, which give good views down main streets; while the latter (fig. 3) is a fair representative of a type very common in Nevers and other French towns. The very interesting svelte tourelle of the Guild of St. Sebastian at Bruges (fig. 4) served the purpose of watching the flying arrows of the bowmen, and it gives a very fine view over the city. It is generally believed to have been built as late as 1685, and if this be the case, and it has not been controverted, it is a remarkable survival of Gothic forms in the end of the seventeenth century. Not only Bruges, but all the towns of the Low Countries are full of turrets of a similar character; while the bartizan, such as the one we have given from Ashby-de-la-Zouch, was a common feature at the angles of all great towers, like the belfries of Bruges and Sluys.

But all of those examples belong to a dead and buried past, interesting for their artistic and archæological value, but impossible of imitation under modern conditions, and it is with examples nearer our own time that we are most concerned. In these days, when the laying out of gardens and garden cities is occupying so much attention, the picturesque gazebo may be again used, as well as summer-houses, pergolas, and other adjuncts of the terraced garden. Many suggestions may be found in seventeenth and eighteenth century work for the successful treatment of this feature, but there are two modes, which once had a great vogue, to be avoided; neither by sham ruins nor by Chinese pagodas lies the way to



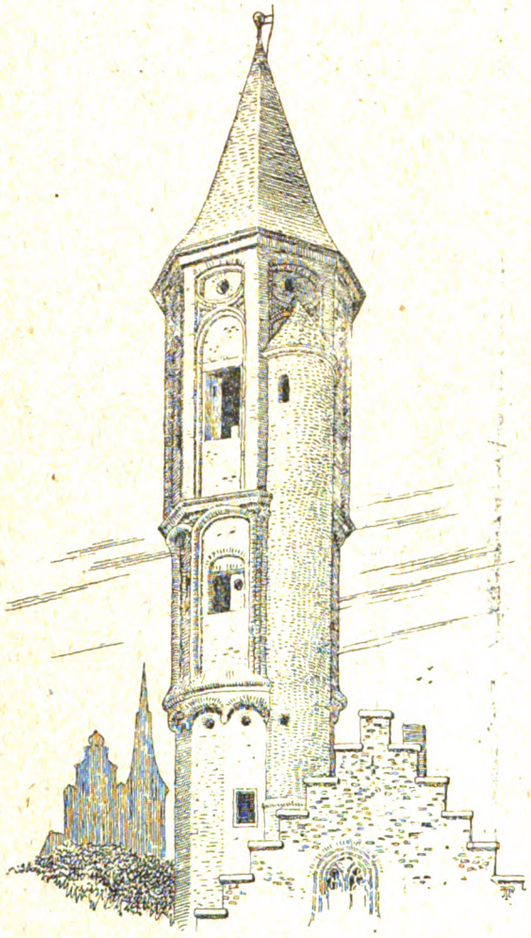
NEVERS

success. Yet both of these methods were employed by Sir William Chambers in laying out Kew Gardens; and much of this work still remains to astonish the present generation, chief of which is his great gazebo so widely known as the Kew Gardens Pagoda. These Chinese towers were extremely fashionable in the eighteenth century, and there was one standing on a bridge across the ornamental water in St. James's Park; while in 1752 Halfpenny produced a book of engravings among

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which were new designs for "A Chinese tower or gazebo." But the sham ruins are even greater favourites than the Oriental productions, as they could be made more realistic or useful, as at Chelsea, where Holland constructed an ice-house out of the stonework of Wolsey's Palace at Esher, or the ruins of Virginia Water, produced by ancient columns and marble work from Corinth, which George IV. had obtained from the British Museum; and as an example of this sort of work we give the gazebo still standing at Gunnersbury House (fig. 5).

There are two classes of gazebos, examples of which are still numerous in the neighbourhood of London, although yearly they are getting fewer from dilapidation or absorption in so-called improvements, which might well be taken as types for reproduction in larger gardens which are being laid out throughout the country, or even in garden cities where the inhabitants have many if not all things in common. These are, first, the summer-house-looking erections raised high on the outside of enclosure walls of house gardens, generally on the edges of public roads or streams, commanding views of all the passing traffic; and, second, structures of two or three storeys in height, the upper ones not only giving extensive views over the surrounding country, but often



BRUGES.

fitted up as banqueting rooms for summer revels. Of the first class numerous examples will occur to everyone using the main roads out of London, from the modest little shanty that is just visible over the garden wall to the great and often ugly structures that overhang the public way, like the great thing which stands nearly in front of the gates to Sion House. Such buildings are also frequently raised by the side of a river, when the gardens abut on one, as in the garden house at Hampton Court, and by the Thames side, as at Richmond; and we give a very pretty example of one (fig. 6) now left neglected and fast hastening to dissolution. This is to be found, after some search among wharves and back-yards, on the towing path of the canal at Brentford, but was built long before that was made. Then what is now canal was the principal branch of the river Brent, looking across the delta of the river, now hollowed out into a dock for the Great Western Railway, but then beautifully wooded and known—who can say why?—as Old England. It is a seventeenth-century structure, octagonal on plan, of red brick with somewhat elaborate woodwork, and its windows commanded fine views looking up the river into Sion Park or down the river over the Thames to Kew. It is sad to say that although our sketch was made less than ten years ago the windows and most of the roof have since disappeared, and before another ten have passed it will become an undistinguishable ruin among its squalid surroundings.

Of the more ambitious or towered kind of gazebo we give an example (fig. 7), also from the banks of the Brent, and like the last named already fallen into ruin and left to neglect and dissolution. Of its history nothing seems to be known, and although standing on high ground and very prominent as seen from the main western road, is quite without mention in the books. It seems to be an eighteenth-century structure in two storeys, the upper one apparently approached by a wide newel staircase at the back which has fallen down, and the chamber on that floor, which appears to have been decorated with paintings, seems to have been intended to be used as a banqueting room. Of this class of gazebo numerous examples might be quoted. There were two such on the river front of the gardens of Beaufort House, Chelsea, and Walpole had one such to his Chelsea house by the Physic Garden, which he used for the entertainment of his friends; and this was the sort of gazebo which Marie Antoinette had built in her Versailles garden, to which we have already referred, and which the French called a "Tour de Marlbrook."

There is another tower of the same sort which, however unpleasant may be its associations, must be mentioned here properly to round off the subject, though it has no claim to our attention either for its picturesqueness or its architectural beauty; and as examples of such we give (fig. 8) two of the grim gazebos which dominate the walls of Wormwood Scrubbs Prison.

A SCHEME OF SYNDICATION FOR THE BRASS INDUSTRY.

The pamphlet before us contains some further observations by Mr. Howard F. Smith on the scheme propounded by him for the Syndication of the Brass Industry, which has attracted much attention and has been favourably commented on by many authorities and by the Press.

The author does not propose syndication with the purpose of forming a trust to put up prices, but as an economic method to secure greater economy and efficiency of working in an industry at present hampered by the fact that many manufacturers cover a very wide field and employ machinery and plant to deal with a great variety of processes which would be better left to specialist firms.

He also draws attention to the immense waste of money and effort in the individualistic efforts of every firm to sell its own products, as separate travellers are sent out to the same town to push the sale of goods which are practically the same, to the great detriment of the common interests and profits of the whole trade.

In addition to this he considers that the purchase and distribution of raw materials would be more effectually and cheaply managed if a Syndicate representing all sections of the trade acted for it as a unit and distributed such raw materials among those who needed them.

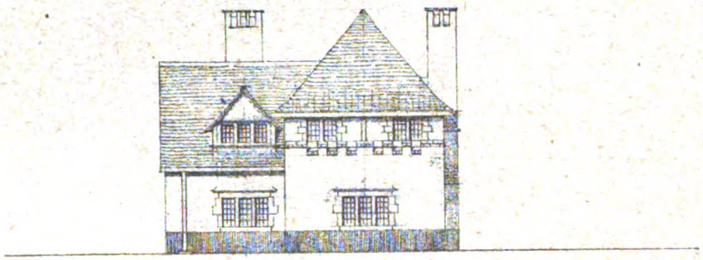
To effect all these purposes and enable the industry to stand the stress of foreign industrial competition, it is suggested that the various businesses represented in the brass industry should be valued on the standard of three years' return, and of a valuation of their plant and effects, and that every one of them should be simplified by being grouped into sections which would fall under the three

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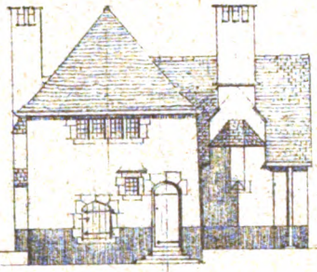
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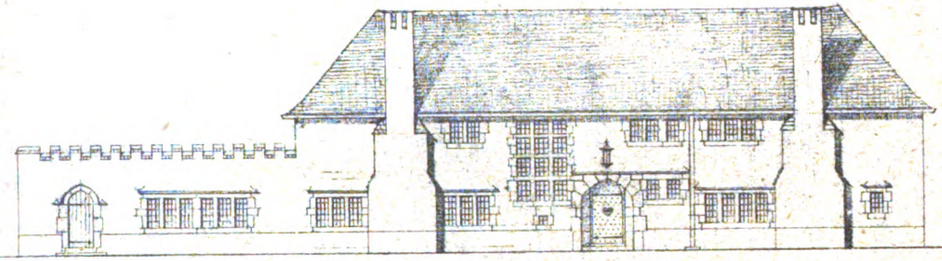
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4TH SCHEME FOR HOUSE AT HATCHAM COLD ASH FOR H. TINGEY ESQUIRE

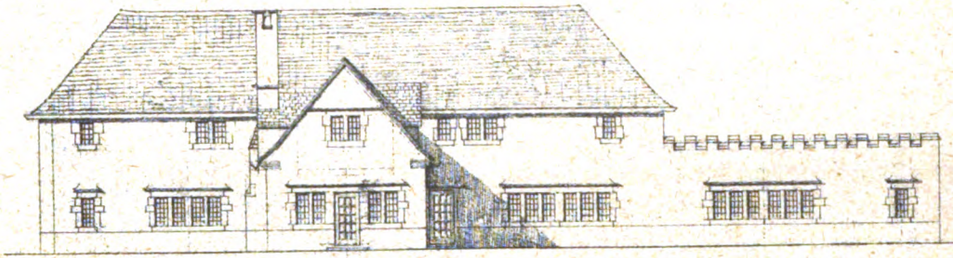


EAST ELEVATION

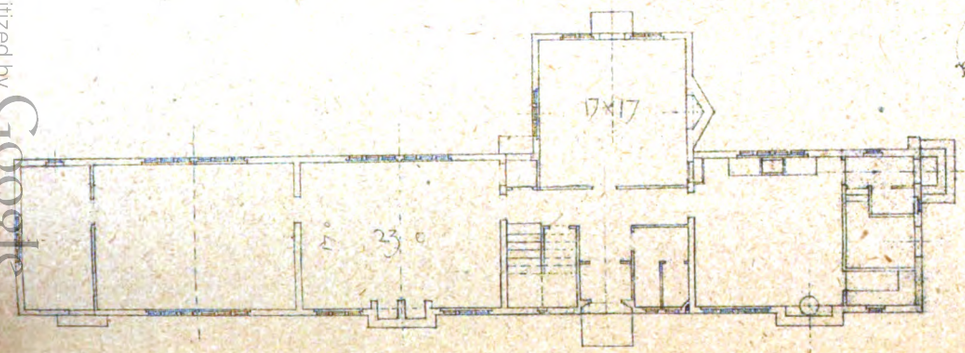


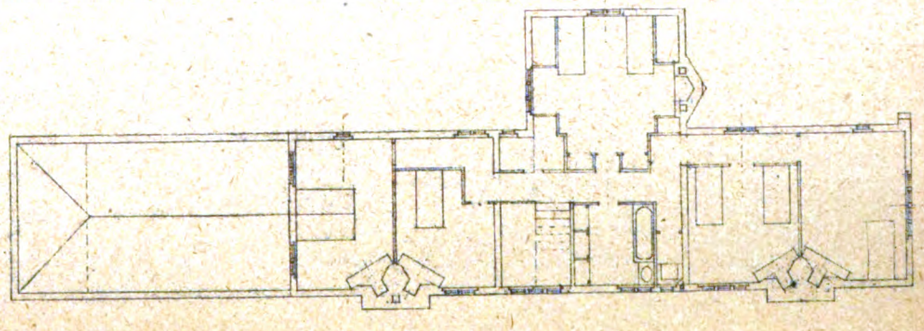


NORTH ELEVATION



SOUTH ELEVATION





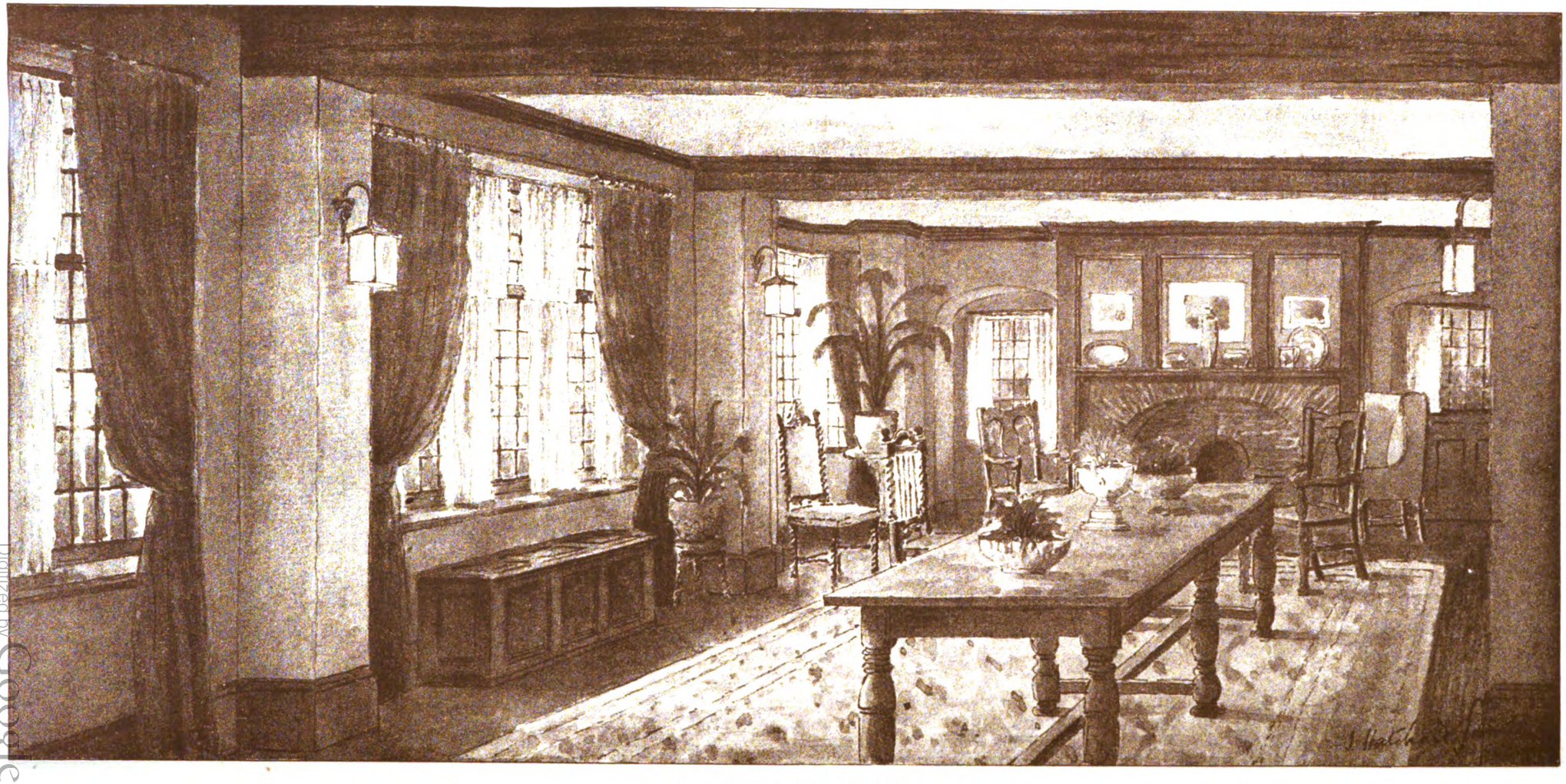
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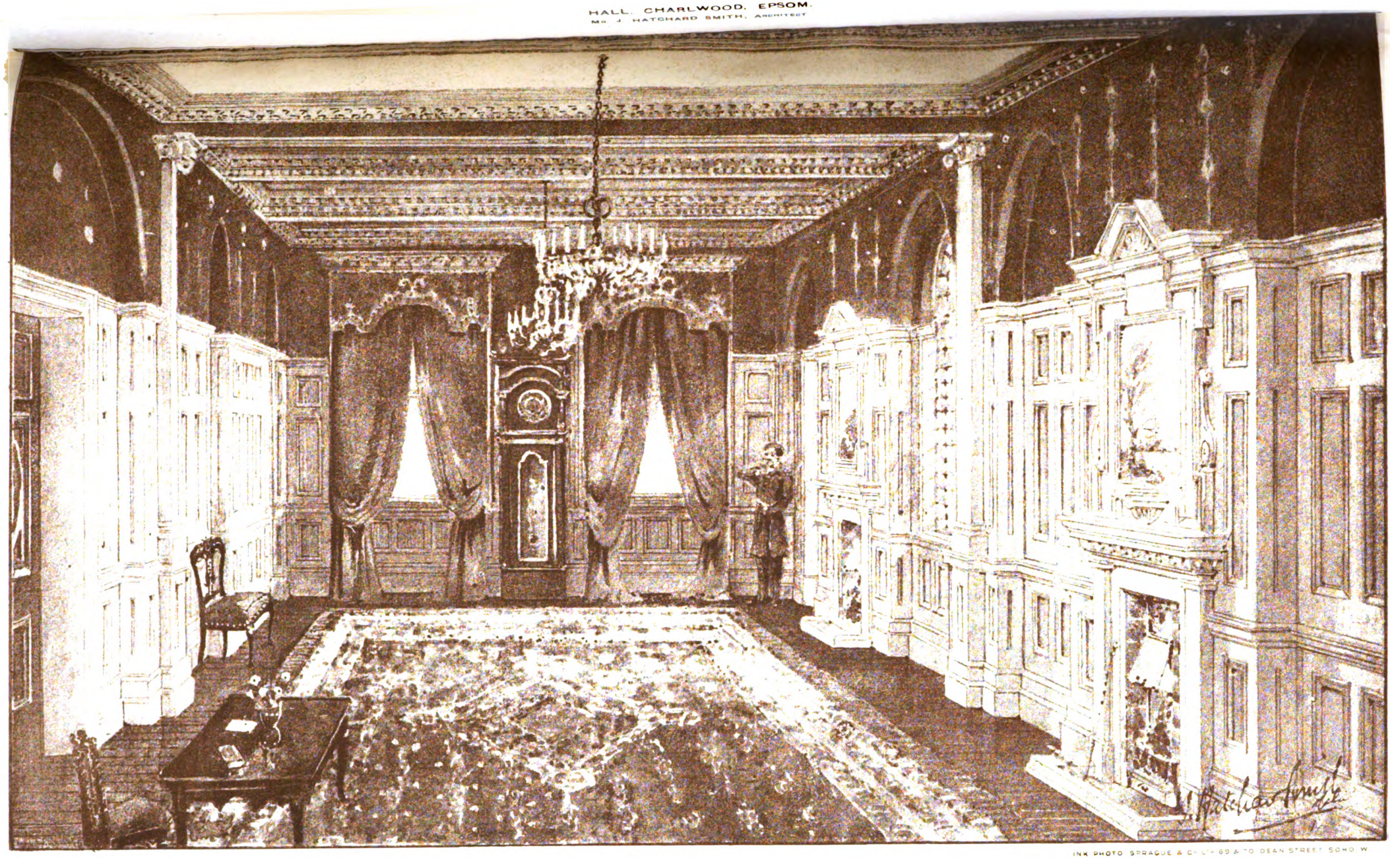


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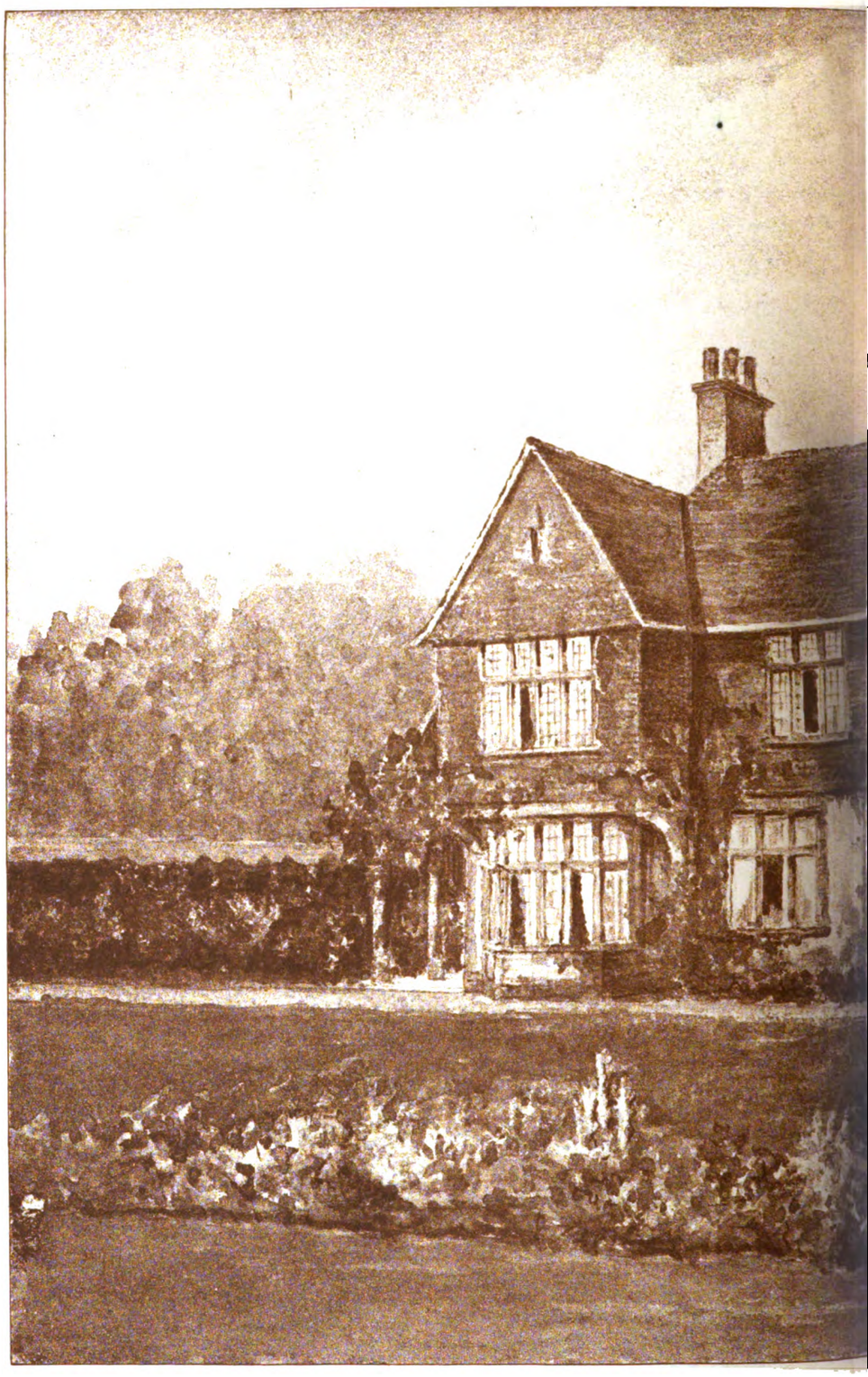
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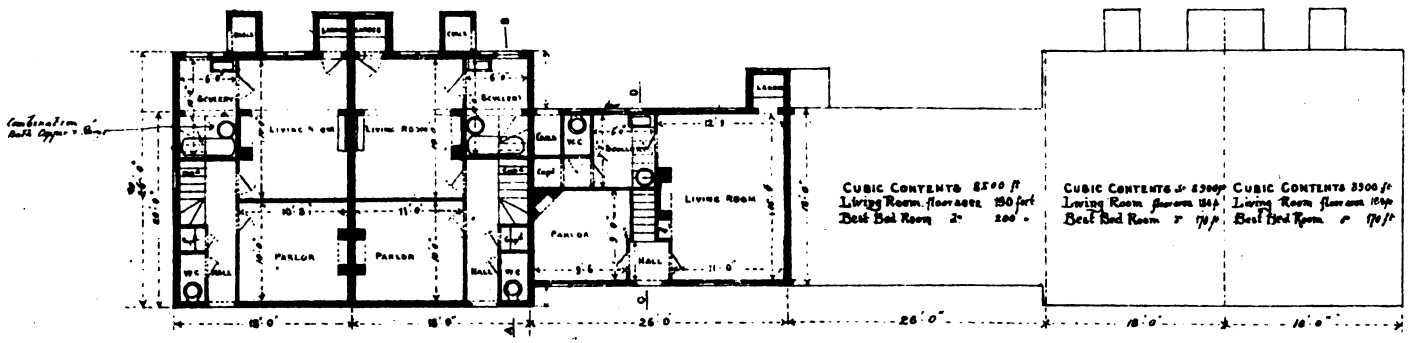
CLASS.C.



— FRONT ELEVATION —

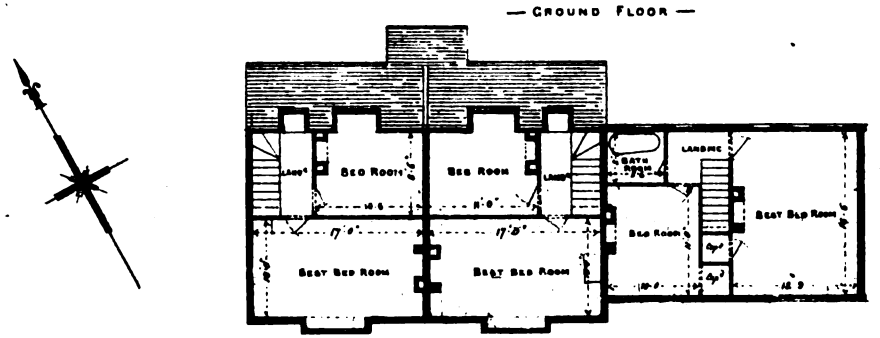


— BACK ELEVATION —



— GROUND FLOOR —

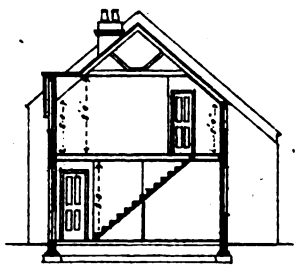
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— FIRST FLOOR —



— SECTION at A.B. —



— SECTION at C.D —

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heads—(*a*) Cast brass and expanded metal; (*b*) Rod products; (*c*) Sheet brass and tube work. The firms which fell under the head *a* would give up that part of their business which fell under *b* and *c*, and would receive from firms belonging to sections *b* and *c* such parts of their business as belonged to section *a*, at a price determined by valuation, and a similar process of elimination and simplification would apply to the other sections.

He suggests that 51% of the capital of the combined firms should be allocated to the Syndicate, which would thus represent a fraction more than half of the total capital of the firms syndicated.

If new firms were formed they should only be admitted to the combine after a searching examination which would determine whether there was any reason why the new firm should be admitted to the benefits of the combine. Presumably, though this is not specifically stated, if such a new firm were not admitted it would have to stand against the organised competition of a syndicate whose powers of cheap purchasing and ready sale would be far greater than that of any individual firm, with the result that cut-throat and continued competition would be eliminated in the interests of the whole industry.

Each firm in the combination would be able to settle down to the task of production undisturbed by the worrying task of arranging its own purchasing and selling departments, and great savings of machinery and plant would be effected by the elimination of the attempt to cover a very wide field of a complex industry. The scheme appears to be one which is worthy of very careful and thorough consideration. Difficulties would probably arise from the representatives of two classes of firms, firstly, the small but ambitious firms who would be dissatisfied with the results of the valuation of their assets, and secondly, of some of the more prosperous and enterprising firms who considered their commercial astuteness and energy gave them an advantage over their less astute rivals. The one would fear by the adoption of the scheme to be more or less permanently condemned to a position of inferiority, and the other would look with disfavour on a proposal which would probably eliminate the advantages they had gained by better business management.

We may say in parenthesis that such a proposal as is here made runs counter to the individualistic tendencies of the average Englishman, but, despite this, we must recognise the great advantages gained in America and Germany by the adoption of broader and more enlightened trading methods. The lament of the supporters of craftsmanship as against machine methods does not here apply, as whether many brass products or only a few are made in individual works all will be produced mechanically. The real question is whether the one or the other system would produce most production and most efficient working, and there can be no doubt as to the answer to be given to this question.

There is little doubt that the principle here outlined with regard to one of our industries will have to be considered in all of them after the war, and with the new machinery brought into being by the Trades Councils under the Whitley Report will do much to end industrial disputes and to stabilise the world of industry.

But while these questions are being considered by employers and employees it is not too much to ask our Government to settle once for all the great outstanding question of Tariff or Free Trade. No internal reforms, valuable as they are, will be sufficient to ensure our commercial prosperity unless we are freed once for all from the fear of unfair foreign competition in our home markets, which proved so heavy a burden during the last thirty years. We believe the manufacturing interests of the country are largely unanimous in their views on this great question, and Labour would be equally unanimous once it could understand that good wages depend on manufacturers' profits, since all the proceeds of industry but the relatively small fraction which those profits represent are the outcome of the difference between the cost of production and that of the sale of commodities. The complicated machinery set up for dealing with the Dyeing Trade would have been unnecessary had the request of the trade for the exclusion of German dyes for a term of years by a penalising duty been acceded to.

Our Governments alone among those of the civilised world hesitate for some inscrutable reason to frankly protect the clear interests of their people, and it is time that we considered the producer as well as the customer, who, with a few exceptions, is a producer himself.

FROM WAR TO WORK.

An inspiring subject for the minds of men and women, and one that is treated in an inspiring fashion by the author of a little treatise which I have been recently engaged in reading, both with pleasure and profit.* In a hundred or so pages Mr. Turner has condensed a mass of well-considered views, well expressed; it matters but little where the book is opened from this standpoint, as something attractive is pretty sure to draw attention. "A conscious aim" in world-organisation is perhaps the most evident recurrent note, which is sounded throughout. The author supports his views by concrete statistics and established facts; if he raises a bogey of querulous or carping criticism, it is only to lay it prone with well-reasoned arguments. Let it be granted that in some respects the policy advocated is one of perfection; it is surely more desirable to aim high, even if partial failure results, than to be satisfied with success on a lower plane. England has, unfortunately, been far too much addicted of late years to living on the acquired capital of previous periods, instead of creating a current income for current expenditure. The same note was struck the other day by the Prime Minister of the Australian Commonwealth, Mr. Hughes, when addressing a meeting at the Queen's Hall—organisation, creation, co-operation, in place of individualism, of lethargy and of Labour versus Capital. The statistics entered in Chapter VI., "Can we afford it?" are very illuminating, making unfortunately apparent the ground gradually being ceded by the United Kingdom in the markets of the world.

I am not professing to agree with every view as propounded by Mr. Turner, but my points of disagreement are so few that it is needless to labour them. But I wish most strenuously to express my concurrence with the remarks in Chapter VII., "Our restriction of output." Faults are seldom the prerogative of one party only, and in the past few years if Labour has sinned so also has Capital; nor is it disputable that if Capital had been freer from blame in years long gone by the hostility of the proletariat would have been far less pronounced. But the quagmire into which British Labour has fallen of late (both before and during the war) in the way of restriction of Labour, as enforced by the trade unions, is likely to prove our destruction, except these bodies become aroused to the disastrous results likely to follow upon a perusal of the policy of preventing men and women from giving freely of their best. As Mr. Turner says, "Whatever we do, let us remember to encourage the individual to express in his work what is best in him. If we rely upon Governments or communities, which have hitherto been the worst enemies to progress, we build our future upon sand." And further he points out, "The great masses of all nations possess at present very few commodities. They never will possess many until they realise that by co-operation of effort between Capital, Management and Labour, *i.e.*, industrial efficiency, they can bring down the price of commodities till they are within the reach of the workers themselves."

Mr. Turner is also an advocate, and rightly, of the fluidity of Labour, and generally speaking he holds the balance equitably in regard to the opposing views as to the faults and foibles both of Capital and Labour. As he

* "From War to Work." By Samuel Turner. (London: Nisbet & Co., Ltd.)

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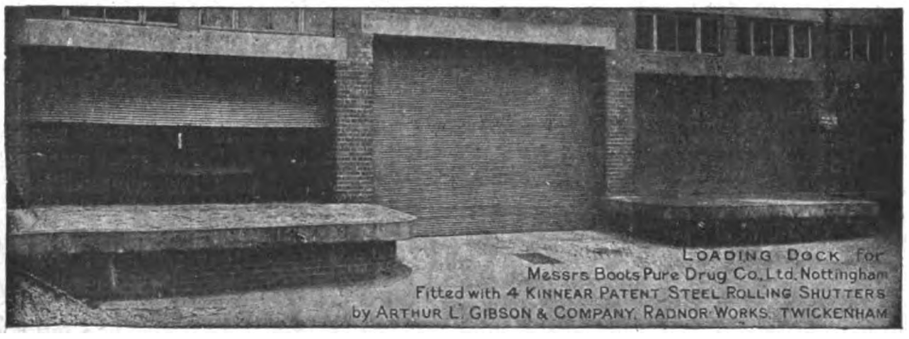
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rightly remarks, "The criticisms which have been levelled against the capitalist system in the past should have been levelled, not against the system, but against its abuses." I am pleased too to read his discriminating remarks with respect to the value of organisation; for he points out that Germany's highly organised system is not responsible for the unspeakable crimes which she has committed; she is bestialised *in spite of*, not on account of, her organisation, and is merely perpetuating her atavistic characteristics. As our author says, "It may be impossible to make a silk purse out of a sow's ear, but it is at least equally impossible to make a sow's ear out of a silk purse. Power wielded by men of moral purpose is wholly good, as power wielded by men of immoral purpose is wholly bad. Fire may nourish life or destroy it; water may destroy life or foster it. It depends absolutely upon the relations in which we put ourselves to these elements." And the last quotation which I desire to make is this: "The carrying out of my proposals will no doubt mean some interference with our individual liberties, but uncontrolled liberty means anarchy. We require ordered liberty, and order is impossible without discipline."

I am fully at one with Mr. Turner in desiring as great freedom for the individual as is consistent with the national benefit, but it is only after adopting a system of centralised control that the various units can safely and profitably be allowed to exercise the individuality that is in them.

P. L. M.

Correspondence

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Wombwell Urban District Council Housing Scheme.

Sir,—I notice in your issue of the 9th an invitation to local architects to submit plans in competition for the laying out of some land in Wombwell for the erection of workmen's dwellings, &c.

Particulars and conditions can be obtained on payment of £5 5s., "which will be returned on receipt of a bona fide design!"

So that architects in addition to giving their work for nothing are to be penalised to this extent, should they change their minds after seeing the conditions, or be unable for any reason to complete their drawings.

I should have thought such a stipulation impossible in these days and hope you will draw attention to the matter in your columns.

The matter has no interest to me, beyond my concern for our profession.—Yours, &c.,

E. Guy Dawber.

[We quite agree with our correspondent and think that deposits for competition conditions should not be asked for. If the conditions and accompanying plans are costly it would be sufficient if each competitor were asked to pay a small sum of one or two shillings, which would be sufficient to cover their cost and to prevent the application of men who had no serious intention of competing, while at the same time the competitor who found himself prevented from competing would not be penalised, and the absurd receipts and acknowledgments connected with deposits would be done away with.

We shall, when times become normal, endeavour to give a résumé of competitive conditions and plans of sites, so that competitors may know what they are sending for.—Ed.]

The New Luxury Tax.

Sir,—While the country is waiting for Committees to report on new methods of taxation, and letting valuable time slip by, cannot something be done to improve the method of collection of the present taxes?

Income tax is now payable by a large number of industrial workers, and the assessment and collection entails a tremendous amount of work.

Might I suggest a means be devised for employers to deduct income tax from earnings when paying wages or salaries, similar to the practice in the Civil Service, to be paid into the Treasury within a short stipulated period, or by the purchase of stamps? This would facilitate collection, it would prevent evasion, and it would provide the Treasury with cash continuously.

As income tax for the year ending April 5 need not be paid in full until the following July, the saving in interest alone would probably amount to many millions.

It would also be convenient to a great number of income tax payers to have it deducted in small amounts rather than a heavy claim at the end of the year, causing them mental anxiety, and the Revenue Authorities considerable trouble to collect.

The difficulties with regard to abatements could be overcome in most cases by the usual return being made, and the Surveyor of Taxes certifying the amount of duty payable, although possibly it would be preferable for a graduated tax to be collected on all incomes from employer and employee by the same machinery as is used for National Insurance, and eliminate the excess profits duty payable by the employer, which in its present form is likely to restrict initiative and endeavour on the part of the capitalist.—Yours, &c.,

Havinden, Managing Director,
The Watford Manufacturing Co., Ltd.
Delectaland, Watford, Herts:
August 16, 1918.

Jameson Memorial Fund.

Sir,—May I, through your courtesy, inform your readers that a fund has been started in Cape Town, and a strong committee has been formed, to establish a memorial to the late Sir Starr Jameson?

The proposal is to build and dedicate to his memory the Central Hall, under the great dome, of the University Buildings which are to be erected at Groot Schuur. In this Hall the young men of the British and Dutch races will meet and learn to know and respect one another, and it will be a powerful and lasting means towards the consummation of Jameson's earnest desire, which he did so much to promote—the union of the peoples of South Africa on non-racial lines.

The site chosen is in view of the Rhodes Memorial on the slopes of the Table Mountain; it is filled with associations of Rhodes and of Jameson, and it is thought that no more suitable place can be found for the purpose.

The cost of the Hall will be 100,000*l*. The fund has been headed with a subscription of 10,000*l*. from Sir Abe Bailey, and other large donations have been promised in South Africa. It is felt, however, that many of those who in this country loved and honoured Sir Starr Jameson will wish to have the opportunity of identifying themselves with the movement, and, at the request of the Cape Town Committee, I invite their co-operation and subscriptions.

Cheques should be made payable to the "Jameson Memorial Fund," and be crossed "The Standard Bank of South Africa, Ltd."—Yours, &c.,

H. Wilson-Fox,
Honorary Secretary in Great Britain,
the Jameson Memorial Fund.
Rhodesia House, 2 London Wall Buildings, E.C. 2.

Plans have been approved for the erection of a new V.A.D. hospital at Oakwood, Rotherham, and the local committee have decided to proceed at once with the work of erection, which, it is estimated, will cost some £3,000.

The Coal Controller is appointing a committee to devise a scheme whereby wasteful grates may be converted into coal savers. The aim is to convert old stoves and grates at a trivial outlay to make them less extravagant in use of fuel. Suggestions are also asked for schemes of using up coal dust.

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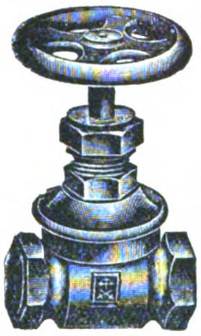
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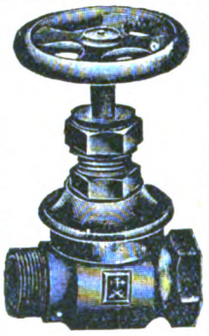
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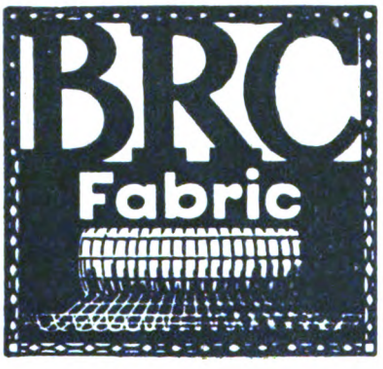
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THE ARCHITECT

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FORTHCOMING EVENTS.

August 12 *to September* 7.

British Scientific Products Exhibition at King's College, Strand, London, W.C.

NOTES AND COMMENTS.

We receive every week complaints of the difficulty in obtaining copies of this Journal. We regret this fact, but the no returns order no doubt accounts for some of the difficulty. The remedy is to give a firm order, either to the nearest bookstall clerk, newsagent, or direct to this office. If any difficulty is then experienced, please let us know at once. A firm order will secure your copy.

We have received an intimation from Messrs. Bradshaw Gass & Hope, the assessors, with reference to the extension of date for receipt of drawings in the Bolton School competition to November 30, in place of September 28. Their letter is published under Correspondence.

We regret to announce the serious illness of a very old and respected subscriber to this Journal, Mr. Arthur Hill, B.E., M.R.I.A., F.R.I.B.A., of Cork. Mr. Hill had a stroke some months ago, and has been lying seriously ill. His son, Lieutenant Henry H. Hill, R.E., who himself has been laid by in hospital, writes us that his father is progressing now, and we trust that he may recover. Mr. Hill has had an extensive practice in Cork, and his illness has caused considerable anxiety to many of his friends.

The Palace at Peterborough is undergoing considerable alteration, with a view to turning it into a Red Cross hospital. The Bishop has reserved the Library of the Palace for his own occupation and the keeping of engagements when in Peterborough. The episcopal furniture is being stored in several small rooms situate in the northern corridor.

A correspondent, writing in "The Scotsman" of the issue of August 20, describes the model dwellings erected in Rome in pre-war days by Signor Talamo, engineer. The dwellings consist of large blocks built round a square with gardens and a large green in the inner quadrangle. All are fitted with electric light, steam heating and hot water. Stringent regulations as to cleanliness are enforced and so all are kept fresh and airy. Good baths have been installed for which a small charge has been made. For the needs of the overworked mother and the little one from three to six years of age, a nursing school with mistress and assistants is provided on the premises. At the moment, consideration is being given to housing schemes, and the erection of some such buildings in the neighbourhood of some of our large industrial centres might be worth consideration.

It is important to consider the question of fire insurance at the present time. The increased cost of labour and materials makes this imperative. With the difficulties of repairs at this period, the risk of fire is a question which requires careful consideration, and every precaution should be taken. Probably some of the serious fires which have recently occurred might have been prevented if it had been possible to overhaul the buildings. We know of one case where an architect called in through a smoking chimney saved from a disastrous fire a building which, through what looked as a very slight defect, might have been exceedingly serious, and the fire, had it broken out, which was only a question of time, would have caused irreparable damage and loss.

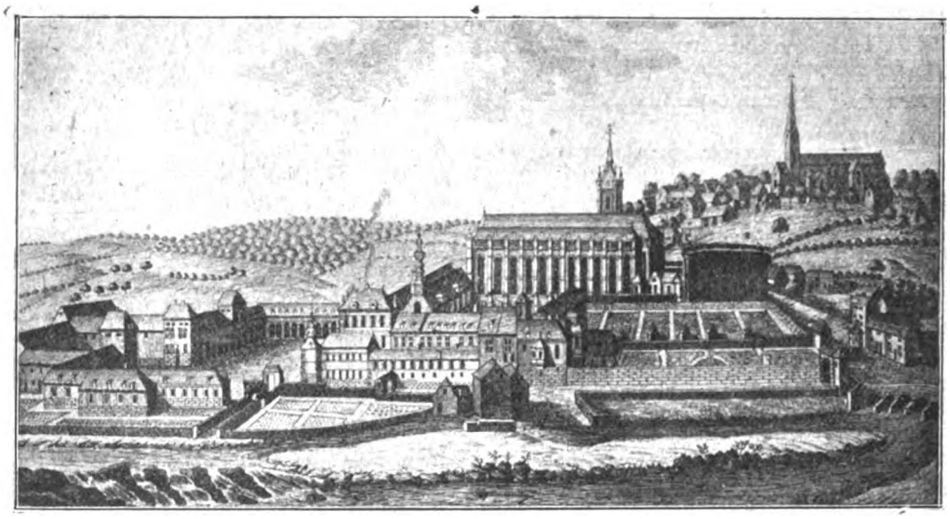
Mr. Herbert Morrison, the secretary of the London Labour party, has asked the housing committee of the London County Council to consider the following suggestions:—Declaring immediately every possible acre of unbuilt-on land, within a 30-mile radius, a "town plan" area under the Act of 1900, so as to control future development and to found a number of new towns on garden city principles; seeking Parliamentary powers to secure absolute control of all building and rebuilding operations in the County and City of London for the preservation of desirable historical features and the prevention of the unhealthy crowding of persons and industries; and endeavouring to evolve such administrative housing machinery as will preserve the maximum local interest and variety, and secure that a bold and comprehensive scheme for the re-ordering of Greater London's industries and residences shall be inaugurated immediately after the war.

We have repeatedly written on the subject of the repeal of the disastrous Finance Act of 1909-10, and shall continue to do so, believing as we do that the present shortage of houses is mainly caused by that ill-advised Act of Parliament. A very pertinent letter on the subject from Mr. Robert S. Lindley, of Godstone, appeared in our contemporary, the "Morning Post," last week, from which we quote the following particulars:—

"In an excellent little pamphlet 'Housing,' by Mr. A. W. Shelton (a widely-known and well-informed authority on urban working-class housing), statistics are given comparing the number of houses built in the five years prior to the passing of the 1909-10 Finance Act with the number built in the following five years, which latter period terminates before circumstances were affected by the war. These show that while in the earlier period practically 170,000 houses were built throughout the country, in the latter period this figure was reduced to 87,654, or only 51½ per cent. An analysis of the details of these figures proves that the reduction in the second period amounted in Scotland to 24½ per cent., in the Northern district to 27½ per cent., in Yorkshire to 41 per cent., Lancashire 42 per cent., the Midlands 46 per cent., the Southern and Western district 49 per cent., the Metropolitan area 52 per cent. This sudden drop in the rate of building, synchronising with the passing into law of the above-named Act, is more than a coincidence.

"We cannot now build the houses. I still question the great number stated by some parties to be necessary, in view of the very sad thinning of our population through the war, unless a general process of 'condemnation' is contemplated; but let us prepare the ground for making a good start as soon as the war is over and financial

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LOBBES, FROM AN OLD PRINT.

conditions permit. One of the first steps should be the removal of any obstacle in the way of the development required. Let the objectionable features of the Finance Act be scrapped, and let us give private enterprise, cottage building societies, and all others who in the period before 1909 provided what was required an opportunity and some encouragement again to fulfil their duty."

For the past six months it has been my privilege to be my own Editor, since Mr. Farrow's serious illness and from the time of his death. When my partner, the late Mr. Robert Hobart, passed away I was fortunate enough to have in his son, Mr. Frank Hobart, a very capable and painstaking sub-editor. This time I have not been so fortunate, as Mr. Hobart, like the majority of our young men, is serving "Somewhere in France." I want to place on record my grateful thanks to the many friends who have so loyally assisted me at this period—a certain learned professor, who prefers that his name should not go down to posterity, Messrs. Randolph, Marks, Bullock, O'Reilly and E. M. L. W., members of my staff and many other friends who have made it possible for me to "Carry on." The new Editor, Mr. Herbert W. Wills, takes over the work as from next week, and it may be possible that some of the illustrations which he will find upon the stone have been produced in a way that he would not have produced them. Well, this will be a legacy which every Editor finds on taking over a journal of this nature. One thing I understand from the new Editor is, that he is determined to keep up the standard of the illustrations. Mr. Wills comes to his work at a very difficult time, the question of paper, shortage of staff, and all the many difficulties which surround the Editor of an architectural and building trade journal of to-day, but he also comes fully experienced in all these troubles, and what is of far more consequence, with a determination to surmount them. He will not find himself lacking in friends to back him up, for I am proud to state that "The Architect" has many such; recent troubles and difficulties have accentuated this fact. In retiring from active control of the Editorial Department of the Journal, I do so having grateful memories of the kindness which has been exhibited by so many architect friends, and make way for one who is better able to do work which must so often be of a technical character; and finally, but not least of all, thanks are due, and I gladly pay the tribute, to my Foreman at the printers' and to the Reader; both have been associated with the Journal for over thirty years, and take that personal interest in it which means so much to any undertaking.

P. A. Gilbert Wood.

ILLUSTRATIONS.

PROPOSED CHURCH.

The site of the church is on rising ground in the centre of the extension of the proposed village. The work will be carried out in ferro concrete, the exterior faced with flint and rag stone dressings, all sills, &c., being treated with zelemy, the piers and arch stones of corn grit. Roof tiled, marble floors to chancel, chapel and baptistery, which will have a sunk bath. Messrs. Hatchard-Smith & Son, 6 Duke Street, Adelphi, are the architects. The drawing was hung in the Academy last year.

CENTRAL ARCADE.—NEWCASTLE-ON-TYNE.

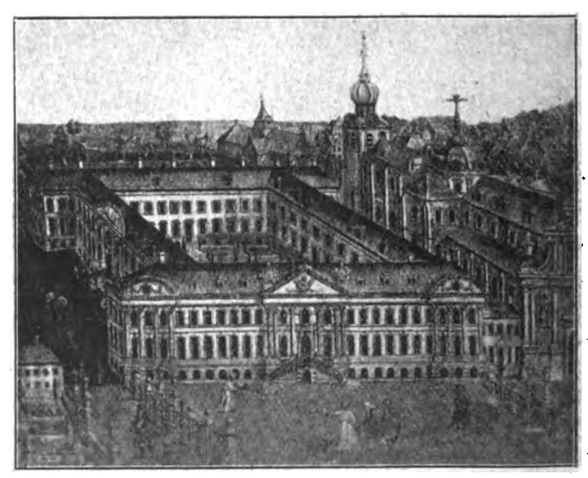
GALTRES CHAMBERS, YORK.

POPLAR SCHOOLS, HUTTON, ESSEX.—THE DINING HALL: INTERIOR.

SOME BELGIAN ABBEYS.

By John A. Randolph.

In the small space available for us it is obviously impossible to deal with all the abbeys of the country; moreover, many of them were so ruined or so completely wiped out of existence, or else altered beyond recognition in the eighteenth century, before the Revolution, that really little remains of pre-Revolution structures, though in some



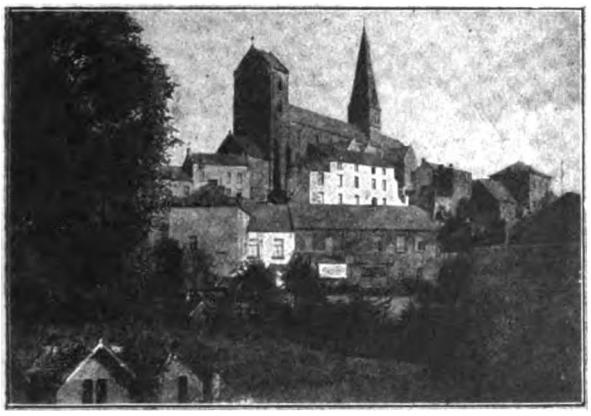
NINOVE, FROM AN OLD PRINT.

cases the town houses, as at Namur and Alt and elsewhere, of the vanished monasteries and abbeys of nuns still exist.

At Ninove, the Renaissance Abbey Church is the sole

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remnant, excepting for the small doorway near the church, the railway traversing the site of the buildings; and at Tournai, as we have seen, the cloister wall at the rear of the town hall is the only portion left of the abbey. Leuze and Ath and Tongerloo have been obliterated, and also Mons and Lobbes, and at St. Trond only the tower of the church (now the seminary) and an old doorway remain. Several are now turned to domestic or civil use, such as Val Notre Dame, Neufmoustier and Grammont, while the abbey buildings of St. Hubert and Warneton exist no more; only a gateway and the great church at St. Hubert are extant.



LOBBES.—GENERAL VIEW FROM SOUTH-WEST.

At Stavelot the town hall is a classical front to part of the edifice, but there is a noble fragment in the great mass of masonry that formerly did duty as tower for the church.

Tongerloo was entirely rebuilt in 1858, in questionable taste and somewhat churchwarden Gothic, though the church is passable if somewhat thin. An abbey near Liège is replaced by great glassworks, and the celebrated house of Dignies is now a mirror factory, and Malonne is



ST. TROND.—TOWER OF ABBEY CHURCH AND DOORWAY

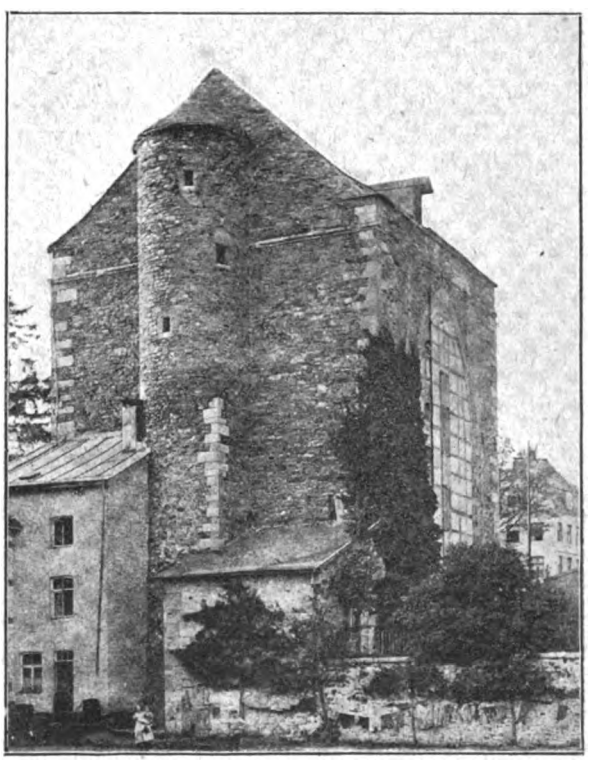
a school, while Floreffe, now a seminary rebuilt in the Baroque style, was founded in 1221 by St. Norbert for Premonstratensians.

Of the Renaissance churches and abbey buildings the finest are to be found at Averbode, near Hasselt, Parc, near Louvain (whence the chimes at St. Pierre of Louvain came), and Gembloux. The Gothic remains are few and far between, Ghent (St. Pierre and the Biloque), Aulne,



VAL NOTRE DAME.—THE PIGEON COT.

Villers, Olive, Orval (near Florenville); the pre-Gothic Ghent (St. Bavon), Hastière, Soignies and Lobbes, where the church (illustrated in the "Call of Belgium") is not the abbey one, but the founder was buried in its



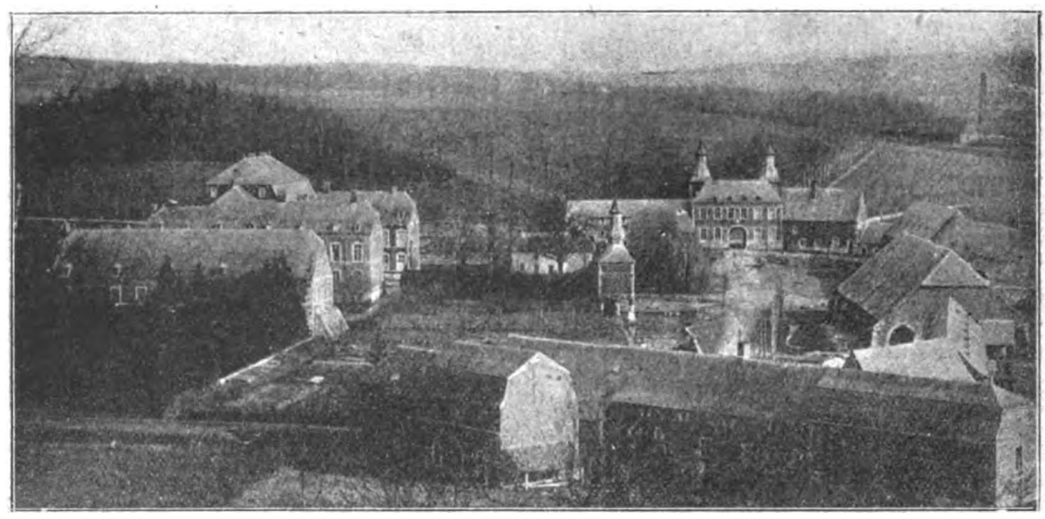
STAVELOT.—TOWER OF ABBEY CHURCH.

crypt under the crossing. The church has been considerably altered, as to west tower and spirelet, at its restoration. Its lofty and massive Galilee porch is a great feature. Small buildings, chiefly used as farms and so

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forth, are scattered here and there about the country, the more noticeable one, larger and more complete than any other put to such use, being the Ferme Bogaerde, of the Abbey des Dunes, and illustrated in the work referred to above.

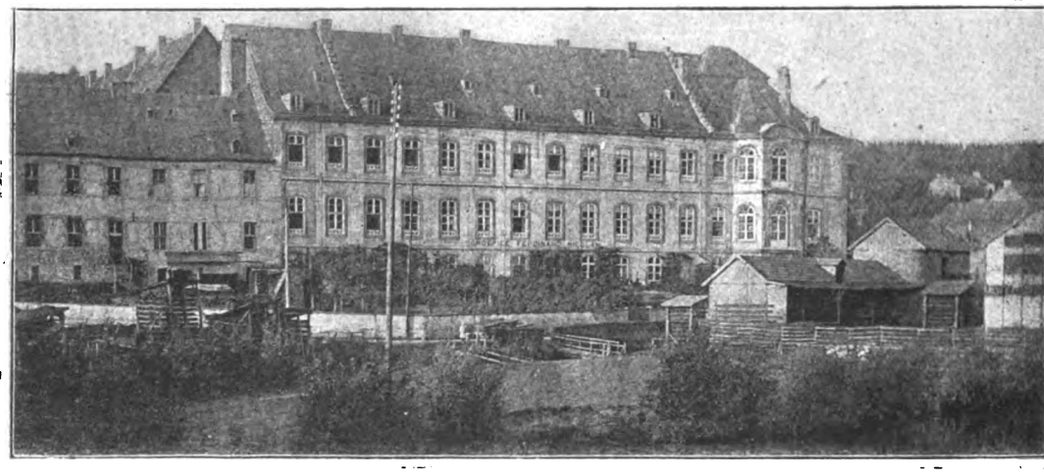
near Namur, founded in 922, were reconstructed in the Renaissance period, and its church is now the parish one, that building having been burned down except the tower. The Institute of Agriculture, till the war, was housed in the fine block here, and the grounds given over to that



VAL NOTRE DAME.—BIRD'S EYE VIEW.



VAL NOTRE DAME.—THE COURTYARD.



STAVELOT—THE ABBEY.

Before the war there were some small blocks of the abbey at Loo,* near Furnes, but the church, of great length, now unroofed and a battered shell, still stood. The handsome steeple, true to the type of the district, was a modern one. The mediæval buildings of Gembloux,

science. A very small fragment of the original building remains, and is illustrated in the "Call of Belgium." The great barn at Lisseweghe, near Bruges, formerly belonged to the abbey of Ter Doest. It is the sole remnant, and has huge oaken beams dating from 1280. The church belonged to another abbey. Southwards, near Ostende, are the remains of a Benedictine House at

* History of Loo Abbey in the "Call of Belgium."

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Oudenberg, and an interesting old church is near. At Dudzeele, near Lisseweghe, was equally an abbey.

Aulne, near Thuin, standing in the middle of a meadow, was fortunately preserved, as to its superb and lofty Gothic church, from being rebuilt in the Renaissance style, a fate which befell practically the whole of the abbey itself. The traceried windows and the walls up to the roof are singularly complete, and of great height; the vaulting and roof, however, are gone.

Ghent possessed no fewer than three—St. Bavon, St. Pierre, and the Biloque. St. Bavon's remains are chiefly Romanesque, and of considerable extent and well known. St. Pierre was rebuilt in the Renaissance period, excepting part of the beautiful late Gothic cloister. As to the Biloque, near the Porte de Courtrai, much of the work visible is crudely modern on the surface, but plans had been made and authorised for its restoration on Gothic lines, and, of course, without plaster, in keeping with the superb traceried gable of which it is such a feature.

Bruges had many small ones.

At Brussels was the Cambre Abbey, in a corner of the Bois. It was secularised at the Revolution, and became the Military Cartographical Institute. At Herent, between there and Louvain, is the church of Vlierbeek Abbey.

Grimberghen, with late Gothic church, lay towards Lenderzeel, from Brussels. It was rebuilt mostly in the Baroque style. Between Mons and Charleroi rose Olive, in 1218, destroyed in 1794. Its foundations were uncovered in 1896.

Clairefontaine, near Arlon, was a Cistercian house, and among some of its treasured possessions was a well in the extensive and secluded grounds, the water of which was miraculously supplied by St. Bernard on his visit there. Hence the name.

Other famous names are Grand Pré, near Namur, and Marche-les-Dames, the first-named a victim of the Revolution; Thérouanne, removed to Ypres in 1559, of which a red brick octagonal turret still stood there till the war; Florival, near Wavre, and Flône, near Huy.

It would be impossible to even name all the abbeys great and small, historical and otherwise, which carpeted the land like daisies in a meadow, but we felt it a duty to record something of a few of the more noted ones.

SAND AND SANDSTONES.

THEIR MINUTE STRUCTURE AND COMPOSITION.

Written and Illustrated by James Scott.

THE numerous applications of sand in the building industries hardly need mentioning to prove that the substance is one of the most important ones obtainable. It is used in bricks and tiles, in mortar, for roadways, for glass making, for polishing and grinding plate glass, metals and stones, and as a cutting agent for marble. When naturally bound together, it constitutes sandstone, which has found so much favour in many quarters as a building stone. Sand, when strongly heated with soda carbonate, fuses to the mineral jelly known as water-glass—*i.e.*, sodium silicate—and as this enters into the composition of artificial stones, the examination of sand is doubly appropriate.

Chemically, sand is silica, or oxide of silicon—that is silicon combined with oxygen. It is curious that when we remove the oxygen from it, the remaining silicon is black. Silicon is the most abundant element on the earth, and in many ways resembles carbon; but it is never found alone, and its isolation is extremely difficult. Sand is its chief compound.

Typically, sand is quartz; but it generally contains small amounts of other substances, such as lime, magnesia, potash, and soda. Quartz, when pure, is a very hard, clear and transparent water-white mineral, which occurs in many beautiful crystalline modifications. Of course, it is an oxide of silicon: so is flint.

It is probable that such rocks as quartz have disintegrated to comprise sand, subsequent amalgamation with colouring and other matters giving the grains their characteristic tints. It is a fact well known to petrologists that continuous exposure of such material to the action of the sun has slowly produced fractures, and the

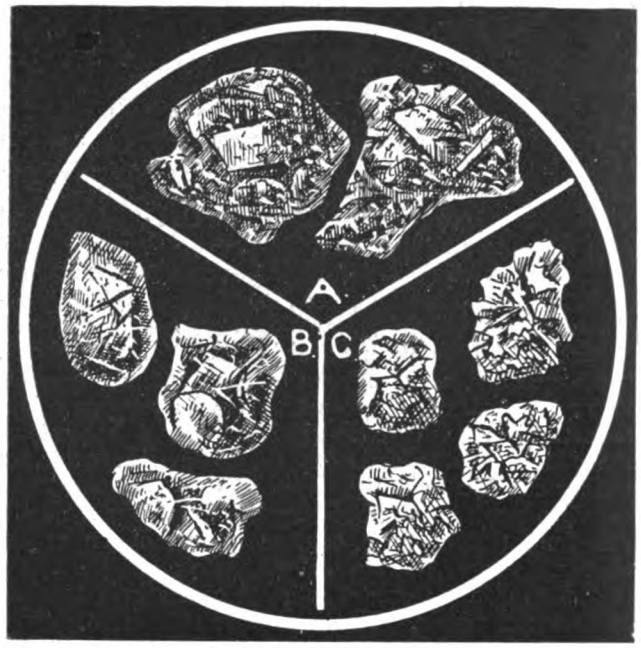


FIG. 1.—Sand grains in a space about one-twenty-fourth inch wide, magnified. A: sharp sand. B: common red sand. C: silver sand.

detachment of extremely fine particles; these afterwards being blown away by the wind, and finally settling as sand. Then rivers and floods have washed the substance onward into the sea, whence it has been redistributed in every direction.

The yellow, brown, and red colours of sand are due to its impregnation with iron oxide of different strengths. Iron oxide is a compound of iron and oxygen. Common

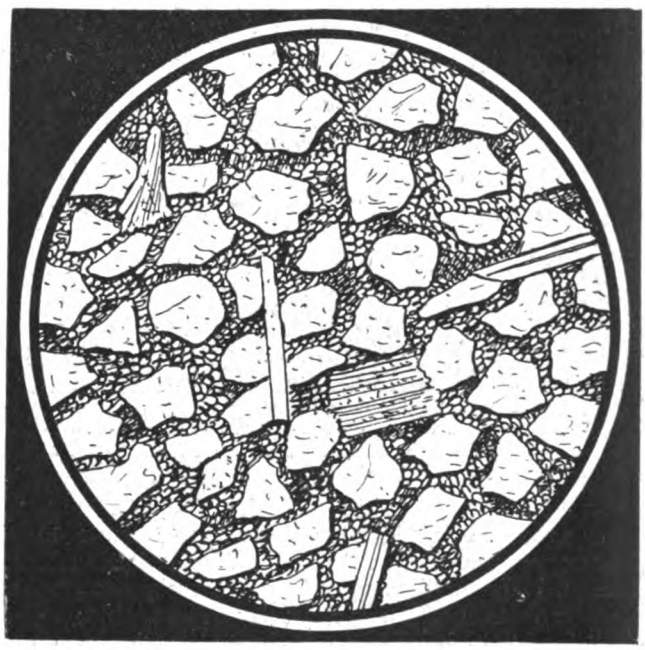


FIG. 2.—About one-twenty-fourth inch of a very thin section of lias sandstone, magnified. The grains consist of transparent quartz, in a crystalline matrix.

rust is its most abundant, or at any rate, best understood, form. It is possible to remove all this colour by means of an acid, the best one for the purpose being hydrochloric. It is necessary to point out that the spirit of salt used by plumbers is often described as hydrochloric acid, which is quite true. But it is impure, whereas pure hydrochloric acid is water-white, and is the one to which my remarks apply.

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Place some sand—the redder it is the more effective will be the experiment—in a glass test tube or jar, and then pour over it enough of the acid named to completely cover it. There will be a rapid extraction of the colour, and the liquid will disclose a greenish tint, since the dissolved iron will be in a ferrous condition. It can be changed into a brown-red one, or ferric, by further oxidation, by means of heat or exposure, and it is curious to note that in the event of a lot of the iron oxide being prepared in this way, it would be possible for us to smelt it, and procure the metal in its ordinary state.

If some of the acid solution referred to, after draining it away from the sand, is gently warmed on a glass slide, it will yield some very attractive crystallisations.

By treating the sand in this manner, and washing it with water, it can be entirely cleared of all iron, and become white and sparkling.

Silver sand, or glass sand, has very little iron oxide in it, and is thus the purest, besides being very fine-grained.

Some varieties of sand are shown magnified in fig. 1, these being at average sizes. Some others are either larger or smaller. Green sand owes its peculiar colour to saturation with silicate glauconite. Other colours are due mainly to some variety of metallic oxide, or similar combination.

Volcanic sand is exceedingly rich in various minerals, and from this kind we can, as a rule, obtain augite, enstatite, felspar, olivine and plagioclose.

All sandstones consist of sand grains held together in a mineral matrix. The latter is, in composition, either siliceous—*i.e.*, flinty—or calcareous—*i.e.*, chalky—although sometimes a mixture of both sorts is present. At

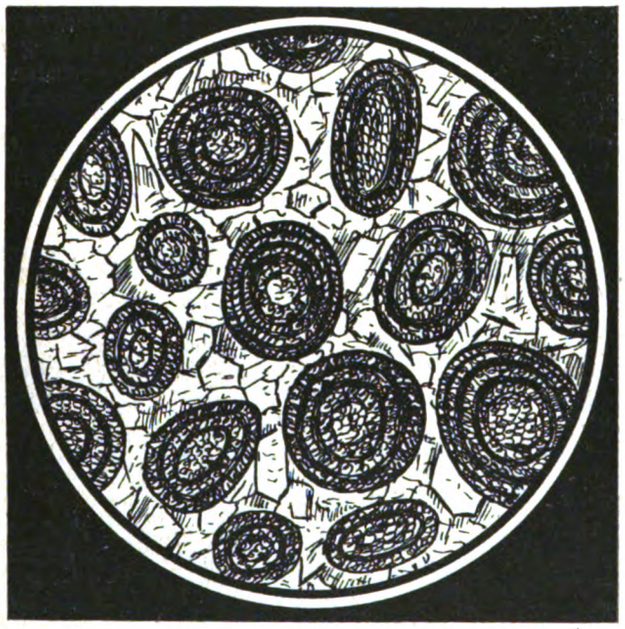


Fig. 3.—About one-twenty-fourth inch of a very thin section of oolitic freeston[e] (a variety of sandstone), magnified. Some of the rounded grains are larger than these.

some time this matrix has been soft and penetrating. After having percolated between the voids or spaces caused among the mass of sand it has gradually hardened, and minutely crystallised meantime; thereby holding the grains quite firmly, similar to the action which follows their mixing-up in cement. Indeed, there is a close analogy between the formation and setting processes of Portland cement containing sand, and the development of sandstone. In each case the binding medium is what is known as crypto-crystalline—that is to say, it consists of various substances which have minutely crystallised, the impervious particles interlocking steadfastly, to produce a dense, compact result.

Sandstones range from very hard to comparatively soft kinds, and like the loose sands, may be yellow, brown or red, on account of the action of iron oxide The better qualities are very resistant to the weather. When a perceptible quantity of clay is present they are somewhat soft and grey in colour, and are called argillaceous sandstones, of which ganister is a good example. Calcareous, chalky, or limey sandstones are still softer; and many specimens are so rich in the mineral indicated that they may be regarded as sandy limestones.

Prettily mottled sandstones occur in some districts. The texture is occasioned by scattered scraps of dead organic matter—such as vegetation—having combined with the iron, thereby preventing it from mixing with the adjoining areas of sand, so that pale figurings contrast with dark surroundings.

In fig. 2 is shown a portion of a very thin slice of lias sandstone, ground (like the next selection) as thin as a piece of paper. The light is here passing up through it, the clear spaces therefore revealing the transparent sections of the grains, between which are the microscopic, binding, crystals of lime and silica.

Dispersed throughout the stone can be found crystals of other substances in addition, but these are only of minor importance, and do not call for separate mention.

When the grains have been rounded—probably by attrition, during mass movements—they give a fish-roe-like appearance or texture to the substance, and are for that reason called oolitic. Freestones belong to this group, and an example is shown in fig. 3, the grains being somewhat large, and in many cases concentric internally, while the intervening matrix or binder is also fairly bold in crystal dimensions. In this case the grains are opaque, and the enveloping substance semi-transparent.

In freestones the iron is commonly distributed with regularity. When it is intermittent and scanty we get the sandy flagstones. Flagstones, however, include limestones, quartzites, and gneisses, and the name is not at all a definite one, albeit in some towns it has a certain distinctness from prolonged usage. But then, the study of rocks and minerals is confused by overlapping terms, and often a word has very little meaning apart from a particular branch of the trade.

The disintegration of sandstone is traceable more to a mechanical than a chemical process, especially when the matrix or binder is, like the sand itself, of siliceous origin. We find that all sand grains are faintly cracked across in many directions. Sometimes the patterns thus produced are what are called conchoidal, or shell-like, and very minute. When such crevices, the fineness of which can hardly be conceived, extend deeply enough, and meet together, they carve out, as it were, tiny chunks of the material, and these fall apart as invisible dust. But it takes a very long time for a stone to suffer seriously in this manner.

The softer sandstones yield also to chemical influences, the acids of the atmosphere reacting with their lime, alumina, and other amenable contents, the rate of decay being dependent on their particular composition.

The actual sand, however, may be considered to be free from attack by smoke, vapours, fumes, and so on, except, as already stated, by merely physical weaknesses.

INSTITUTION OF MUNICIPAL ENGINEERS.

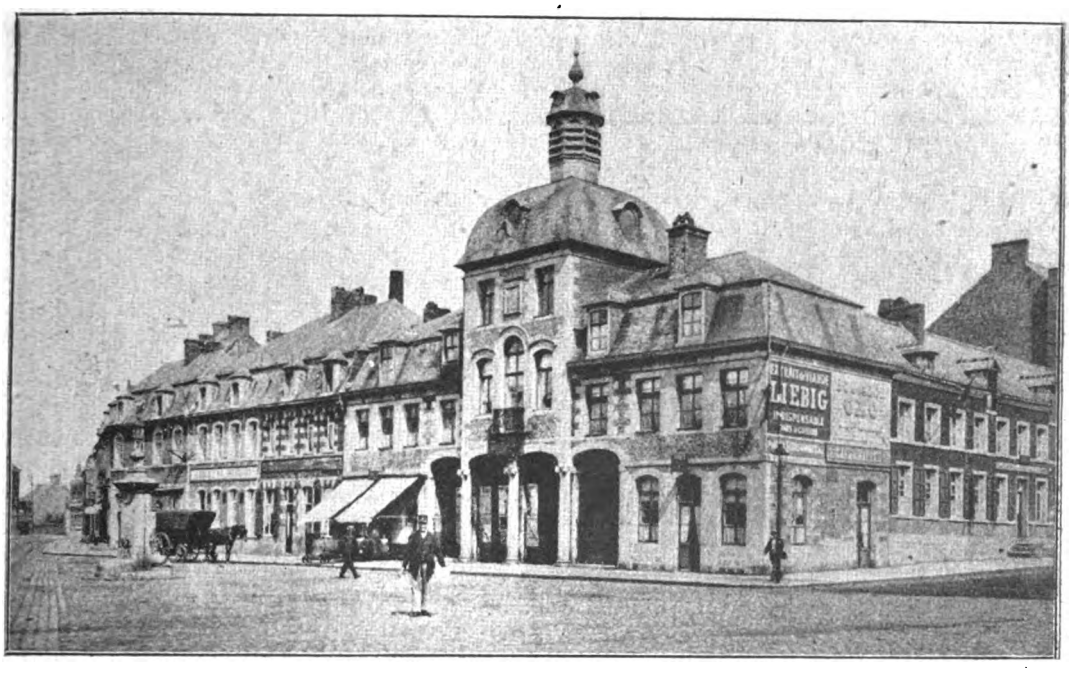
The annual meeting of the Institution of Municipal Engineers will be held at Southall on October 9 and 10. Offers of papers are requested, and members are asked to make early submission of papers. The list of subjects suggested is as follows:—

General.—Methods for filing to be adopted in a municipal engineer's office. Statistics for municipal engineers.

Surveying.—Topography by photo-theodolite. Description of any actual survey carried out and the instruments used.

Sewerage and Drainage.—Recording rate of flow in times of storm. Pressure on sewer pipes at varying

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ST. GHISLAIN, NEAR MONS.

depths in different soils. Maintenance of a sewerage system in a mining district. Description of design and lay-out of a drainage scheme in actual practice. Sewer and drain ventilation. Removal of silt from sewers. Air compressing plant. Pumping machinery and tests. Laying sewers in unstable soils.

Sewage Disposal.—Purification of trade wastes. Description of and results obtained at a particular sewage disposal works. Experiments on tankage settlement. The economical management of a sewage irrigation farm. Records of flow into sewage disposal works. Tidal and current observations. Utilisation of sewage sludge. The treatment of sewage by activated sludge.

Water Supply.—Description of a waterworks undertaking. Experiments in flow, evaporation and absorption. Softening of water. Water purification. Removal of impurities from drinking water. Measuring and supply meters. Detection and prevention of waste. Maintenance of capacity of mains. Reinforced concrete water tower.

Road Making.—Road foundations and drainage. Maintenance of roads in mining districts. Road surfacing, its value and cost. Suggestions for improvement of roads in rural districts. State, county or local authority control of roads. Widths of roads and footpaths for various kinds of traffic. Dustless roads. Effect of motor vehicles on roads.

Bridges.—Description of a bridge with details. Description of a reinforced concrete bridge with details. Under bridges, over bridges and culverts.

Tramways.—Electric *v.* railless traction. Corrugation in tram rails. Maintenance of tracks. Tramway construction. Light railway construction.

Buildings, &c.—Protection of buildings against fire. Building by-laws, (*a*) Urban, (*b*) Rural. New building materials. Suggestions for economy in erection of working class houses. Maintenance of buildings in mining districts. National kitchens and restaurants. Testing building materials. Markets. Asylums. Housing schemes. Schools. Fire stations and protection against fire in towns. Fire appliances. Municipal piggeries. Municipal rabbitries. Laying out parks and pleasure grounds. Laying out cemeteries.

Sanitation.—Suggestions for scavenging in rural districts. The use and abuse of city streets. Suggestions for economical collection of house refuse. Salvage in towns. Utilisation of tins. The organisation of a scavenging department. Destructor results. Utilisation of house refuse. Street cleansing.

Public Health Law.—Suggestions for remedying of law relating to admission of trade wastes into sewers. Town planning procedure (suggestions for simplification). Town planning schemes. Anomalies in building by-law cases before the Courts. Amendments in the law relating to sewers and drains. Suggested amendments to the law relating to highways. Water right and arbitrations. Extraordinary traffic (suggested amendments to the law on).

Miscellaneous.—Street illumination. Should municipal engineers be organised. Security of tenure and superannuation. Notes on coal control. The value of one institution for municipal engineers (for or against).

The above are, of course, only put forward as suggestions. Papers on any other subject, and with any other title, on matters of interest to municipal engineers are invited.

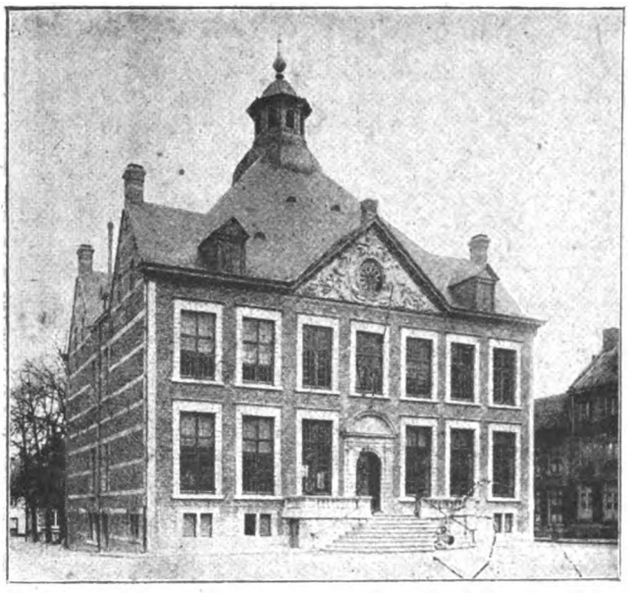
THE COMMITTEE ON WAR DAMAGE.

A MEETING of the Executive Committee was held in the hall of the Brewers' Guild, E.C., on Wednesday, August 21, the President, Sir Forster Todd, Lord Mayor of York, in the chair. The letter of July 23 from Mr. Bonar Law, in which he replied to the request that he would receive a deputation from the Committee, was further considered. Mr. Bonar Law had written to the effect that the scheme introduced by the War Cabinet on November 5 last was, "in the opinion of the Government, the most satisfactory solution of the question that could be found, and nothing had happened which would justify any other view. In these circumstances I do not think that a deputation would be of assistance."

On the motion of Mr. Mark H. Judge, Chairman of the Executive Committee, seconded by Deputy Sir Robert H. Rogers, the following resolution was passed unanimously:—

"That whereas the corporate bodies forming the Committee on War Damage include 842 municipal authorities having a population exceeding 32 millions, we are of opinion that the Chancellor of the Exchequer cannot have given due weight to the representative character of the Committee when he said in his letter of the 23rd ult.: 'I do not think that a deputation would be of assistance.' In any case we hereby renew our application to be received by Mr. Bonar Law, feeling assured that a conference between the Chancellor of the Exchequer and the Committee is eminently desirable in

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the public interest, seeing that it is of the utmost importance that the question at issue shall be so settled as to prevent it being a bone of contention at the next general election. In support of our request we submit the following:—

"The Committee on War Damage are contending for the principle that all citizens injured in person or estate by air raids or bombardment should be entitled to compensation from national funds. The Prime Minister expressed full agreement with this when he received the Committee on July 13, 1917, but, as yet, it has only been given effect to in a very limited degree. The concessions made since the constitution of the Committee are: (1) A reduction of 50 per cent. on the premiums for insurance; (2) compensation by way of grace for personal injury in certain cases; and (3) (since July 13, 1917) compensation for damage to property in certain cases up to £500, but only for damage subsequent to August 1917, that is after three years of the war. These concessions in no way meet the case, and while we welcome them as some recognition of national responsibility, they are so unsatisfactory that the question cannot be allowed to remain where it is. There is no principle in a scheme which fixes upon an arbitrary sum in hundreds when the damage is measured by thousands, and leaves out of account all damage exceeding that amount, especially when damage inflicted prior to September 1917 is entirely ruled out, and we therefore feel that we are entitled to ask the Chancellor of the Exchequer to reconsider with our deputation the principle of full national responsibility as set out in our memorial, viz.:—

"That the Government scheme for insuring against loss or damage by aircraft or bombardment, which has made individual citizens responsible for war damage inflicted on them by the enemy, is manifestly unjust. That it operates unfairly because it throws upon certain sections of the community burdens and reponsibilities which should be shared by all.

"That the Riot (Damage) Act, 1886, which provides that, in the case of damage by riot, compensation is to be paid to the sufferers out of the police rate of the district, recognises the just claims of the individual, and it would appear that persons who suffer direct damage to their property by the action of an enemy country during war have a still stronger moral claim to compensation, such compensation to be a charge upon the taxes which have been paid by them primarily for the purpose of protection against foreign enemies.

"That the loss of life or personal injury due to enemy air raids or bombardment should, as a matter of course, be duly recognised by the Government as involving such compensation as it is possible to make from national funds."

It was unanimously resolved to adjourn the question of arrangements for the next meeting of the General Committee.

THE CLEANLY AND GODLY WORKMAN.

By One who is Neither.

Should a working-man have a bathroom in his dwelling-place? This is a question which I have been asked aforetime, and to some it would not seem difficult to give a direct answer in the affirmative. Why not provide such a convenience? my readers may say. Are we not told that cleanliness is next to godliness, though this is too often interpreted in the sense—Take care of the skin, and the soul will look after itself?

The propounded question is one which will bear a passing consideration. Why should bathrooms be the prerogative of the multi-millionaire, or even of the multi without the millionaire? for we cannot disguise the fact that the bulk of the population—the middle class—is at any rate the skeleton of the world, whether or not it may be the backbone.

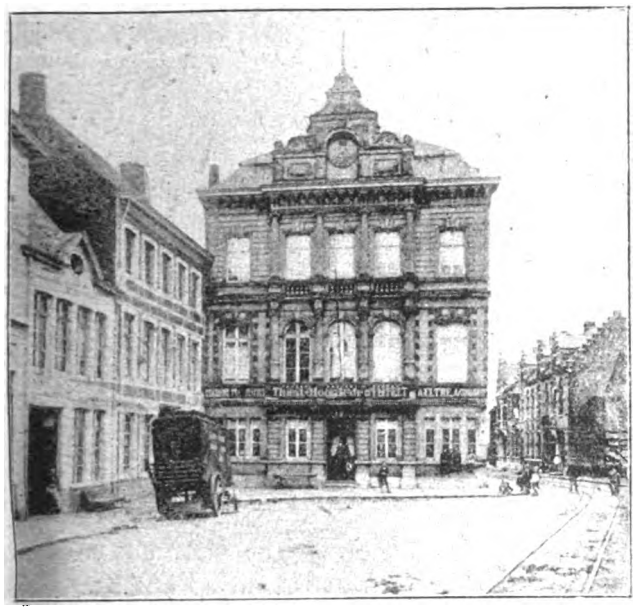
After all it may be assumed that if we are to rub shoulders promiscuously most of us would choose the clean, in preference to the unclean, when friction is to take place. The question as to the provision of a bathroom in every cottage has been on the tapis for a lengthy period; every popular exhibition contained some wonderful combination of fittings intended to make the mouth water and the purse-strings open. Nor would the expense be prohibitive, if we may be guided by some remarks appearing in a book, written by Mr. Gordon Allen, wherein he tells us: "A bath is now considered to be a necessity in every house. Thanks to tip-up and other patent baths, which can be fitted in the scullery and folded up when not in use, the cost of convenient bathing facilities is not prohibitive in the smallest of cottages. Some of these baths have covers made in the form of a draining-board, which is useful for standing on after stepping out of the bath, and at other times makes a convenient table."

M'yes! it sounds all right—it looks all right in black on white, but I think there is more in it than strikes the casual tympanum or meets the casual retina. Do the average working man, woman, and child want a bath? Is it not regarded by them as more in the nature of a luxury for those who rise at eight o'clock or later and are able to spend an indefinite time splashing about, and thinking, perchance, that they are godly because they are clean? Isaiah exhorted the people, "Wash you, make you clean; cease to do evil, learn to do well," and we may observe that the prophet put cleanliness before godliness; it is clear that Utopia was not achieved in those days, nor has it been achieved since.

"Mais, revenons à nos moutons noirs"—let us return to our black sheep. Supposing the average working man were to be asked his views he would reply with greater vigour than elegance, "I don't want no —— bath in my —— house!" As a matter of fact, the arrangement so often met with, whereby a bath is installed in the scullery, is not the ideal of cleanliness at all, not even if it were used merely as a bath; it is, however, far more likely to be used as a receptacle for coal, or, if used for washing at all, for washing soiled clothes. Nor does the combined draining-board, foot-board, and food-table, suggested by Mr. Allen, seem a very palatable provision.

Again, it must be remembered that the slipper-bath is not ideal in the home of the artisan, whose labour is of a crocky nature and who would thus welter in his own grime, were he to use such a bath. There is, from this aspect, everything to be said in favour of the wash-down bath (be it douche, spray or soap); the man is by this means washed clean of his grime and its place shall know it no more; this fact is becomingly increasingly recog-

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nised in public bathing establishments in English working-class districts, and it has been long since practically recognised abroad.

I am far from suggesting that there is any one class of humanity possessing the hydrophobic sense; my desire is merely to impress upon my readers that if cleanliness is to be a matter of education it must be fostered upon proper lines. I have indeed no intention of dogmatising, and yet having considerable experience of the homes of the artisan class, I have discovered that both ventilation and sanitation are too often regarded, not as boons, but banes, despite health visitors and care committees. A broken window pane (providing ventilation in the wrong way, I will admit) is looked upon as an unmixed evil—to be choked promptly by old rags, and Tobin's and other mechanical ventilators are similarly treated. In the course of my visitations I have found that a cow-catcher would often be advantageous, in order to cleave the air inside a dwelling; and in an eating-house down Shoreditch I have seen kippers suspended from the ceiling of a water-closet.

Do we not all know the process of slum-making? We see a street of terrace-houses of an original rental of £60 or more, at a later period appreciably reduced in value; the good-sized rooms, which formerly housed the Jane Austen type of womanhood, have lost their erstwhile daintiness (such as Mr. Hugh Thomson could so sympathetically delineate) and are given over to grime, squalor, tawdriness—and atmosphere. Clare Market and Bethnal Green areas may be cleared and remodelled, but the process of slum-making continues almost unchecked; for we cannot legislate efficiently against human nature.

The fact is that the typical artisan will not be bothered; give him real facilities for cat-like comfort, and he may perhaps accept them; give him a system of ventilation where he is unconscious of its presence, and he will not resent it. I doubt whether even a soap-bath would be extensively used by him; but a tip-up bath (which connotes tipping down in the first place and filling with water) will remain unused by the artisan-class—*as* a class—until the crack of Doom.

Captain Wedgwood Benn, D.S.O., M.P., has been awarded the D.F.C., the new decoration for the Independent Air Force, which is only awarded for conspicuous gallantry in the air in the presence of the enemy. Captain Benn is one of those members of Parliament who take a very literal view of the meaning of the term "active service," and since joining the Army in October 1914 has only twice been in this country for short periods of leave.

HOUSING AFTER THE WAR.

SCOTTISH ARCHITECTURAL COMPETITION.

The Treasury have now conveyed to the Local Government Board for Scotland their approval of the conditions governing the architectural competition about to be promoted by the Institute of Scottish Architects under the authority of the Board.

The competition is open to any British subject, and is divided into three sections. The first two sections are for lay-out plans, accompanied by designs of (1) two-storey cottages and flats, and (2) tenements restricted to three storeys. The third section is for the design of cottages for rural areas without a lay-out plan. The accommodation to be provided in the various types of houses comprised in all three sections varies from a living-room, scullery, and two bedrooms, to a living-room, scullery, parlour, and three bedrooms. Intending competitors in sections I. and II. will be duly furnished with plans of selected sites (upon which their schemes have to be based).

Premiums to the total value of £725 will be awarded by the Committee of Selection for the most meritorious designs.

As the result of the competition, a panel of architects whose designs are approved by the Committee of Selection will be formed, and a list of the names on the panel will be furnished to local authorities preparing post-war housing schemes, with a recommendation from the Board that architects on the panel should be appointed to advise in carrying out such schemes.

The conditions of competition—which will be issued in extenso at an early date—reflect concisely the official mind as to the nature of after-the-war houses, and we commend their perusal not only to all architects, but also by all those concerned in this burning question. In due course public notice will be given as to where copies of the conditions are obtainable.

REFRIGERATOR INSULATION.

For over thirty years now the problem of various methods of insulation has occupied the attention of specialists in this branch of the engineering profession, and ever since the first cargoes of refrigerated overseas produce were landed in this country, costly experiments have been made to determine which materials gave the most satisfactory results. It is not the writer's object to go into past history, though, like every other modern industry, it is full of romance, but to briefly review the methods in use to-day, with their advantages and otherwise, more as a general guide than to give a mass of scientific data which—unless thoroughly understood—would be more liable to mislead than help those who may be brought into touch with the subject.

The materials most favoured by insulating engineers of to-day are cork for cold, and magnesia for heat insulation, but as insulation of heat hardly comes within the scope of the architect, it is intended to confine this article to that for cold only, as the insulation of cold-storage is so much to the fore at the present moment. Both these materials are thoroughly effective and have gained their position among their class as the outcome of both experiment and experience, though charcoal and slag-wool (known as silicate cotton) are also used and have their adherents.

To determine the conductivity of any material is a complicated and expensive process; and, even when carried out under apparently identical circumstances, has given widely varied results, but such can hardly be wondered at when the circumstances under which they are made are taken into account.

In practically all such tests either the direct contact method has been used, *i.e.*, applying a chilled surface to one side of the material under test and measuring the amount of heat passing through; or else a makeshift apparatus, consisting of a small box lined with the test material, cooled by melting ice.

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The first method is objectionable because air contact and not direct contact prevails in cold storage construction, and if the results thus obtained are used disaster will surely follow. The second method is, from its mere crudeness alone, absolutely unreliable, while both create artificial conditions entirely different from those encountered in actual service. So many varying factors are to be taken into account that the results are not only inaccurate but can easily be positively misleading as reliable data, and are of no value whatever in determining even relative efficiency.

The only way to test conductivity with certainty is on a comparatively large scale, under similar conditions to those found in actual working combined with positively accurate methods of measuring the heat loss.

To the writer's knowledge, this has never been done in this country, but it has in America where thousands and thousands of pounds have been laid out in actual working-sized chambers which have been submitted to every possible test (including an attempt to burn them down) and it is on the results obtained by these exhaustive experiments that the present general form of insulation is based.

Here compressed cork-slabs established their undoubted superiority, and have consequently been widely adopted by the most up-to-date installations. Other methods are practically obsolete at the present time for various reasons, the principal one being that they are not self-contained, or in other words, require materials which are difficult to obtain before they can be efficiently fitted. This also adds to the expense. With charcoal or silicate cotton a properly constructed hollow shell or lining has to be built to contain them into which the material has to be packed tight to avoid settlement and consequently vacant spaces. Even with the greatest care this action generally takes place with the lapse of time, and leaves portions which are practically weak spots through which heat can penetrate.

This difficulty does not arise with the cork-slabs. It is hydraulically compressed under heat into slabs of different thickness and length for convenient handling. and also suitable shapes for work on beams and corners. It is also made in various qualities. The generally recognised formula is that a slab will give as much protection as double its thickness in any loose material, so that a four inch thickness of cork-slab is equal to eight inches of granulated cork. There is therefore a very considerable gain of space available for storage when these slabs are used, which is a valuable asset.

All insulating materials suffer more or less from one very great disadvantage—the absorption of moisture and odours, and it has been the aim of all insulating engineers to design some protective method which shall be speedy, efficient, and economical. The highest efficiency is naturally gained where joints in the protection are reduced to a minimum. Wood, and iron plates have both been used with more or less success, but they have their disadvantages which must not be lost sight of. Wood in a seasoned condition is practically unobtainable now, and if installed in green condition shrinks considerably. This means open joints for moisture to penetrate, which is fatal to efficiency. In addition it has to be itself further protected with shellac varnish to keep it non-absorbent, so there is also the upkeep to be reckoned in addition to the heavy expense of material. Iron plates are liable to corrosion and are thus difficult to keep in perfect condition; they also require a good deal of extra fittings in the way of angle-irons, bars, bolts, &c., which add very materially to the weight of the installation.

The other remaining method is what is termed the "jointless finish" in plaster, and the firms who work this system each have their own special material for use in this way. Ordinary plaster will not answer as it has been found too absorbent. If moisture penetrates this the freezing bursts the surface. The protective covering of the basic material must be strong, odour, rat, and fireproof, but principally must it be impervious to moisture. Water is a good conductor of heat, therefore, once damp gets into the insulation it becomes practically useless as an insulator and it would be better to have none at all.

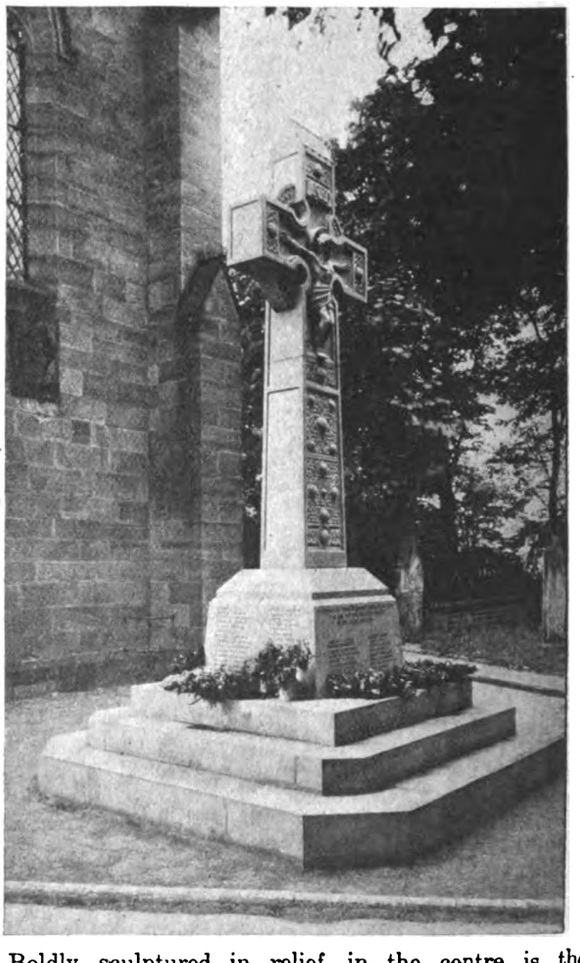
It is a necessity, particularly where food storage is concerned, that the surfaces permit of being regularly flushed, hosed, disinfected, so it will be readily seen that any surface which has a multiplicity of joints presents so many weak spots when faced with this operation.

When this "jointless finish" was first tested in America it was not a success, on account of its liability to crack if exposed to much vibration, but this fault has been completely eliminated and the materials in use at present have been exposed to some very severe tests, both on shipboard and ashore, but for years a damaged chamber has been unknown.

Common-sense therefore teaches the fact that now the facing materials have been brought to such perfection a smooth jointless finish, which is proof against moisture, odours, and such-like dangers is ideal for its purpose. It is economical, very quickly installed, and requires no attachments whatever. The cork-slabs are fitted, then cemented in place, without any through joints, by the use of a cement with a bituminous base. The whole is then completely covered with two coats of the finishing marble-like composition, which makes a thoroughly satisfactory and permanent job of the whole. There is no cost of upkeep whatever.

WAR MEMORIAL AT WINLATON.

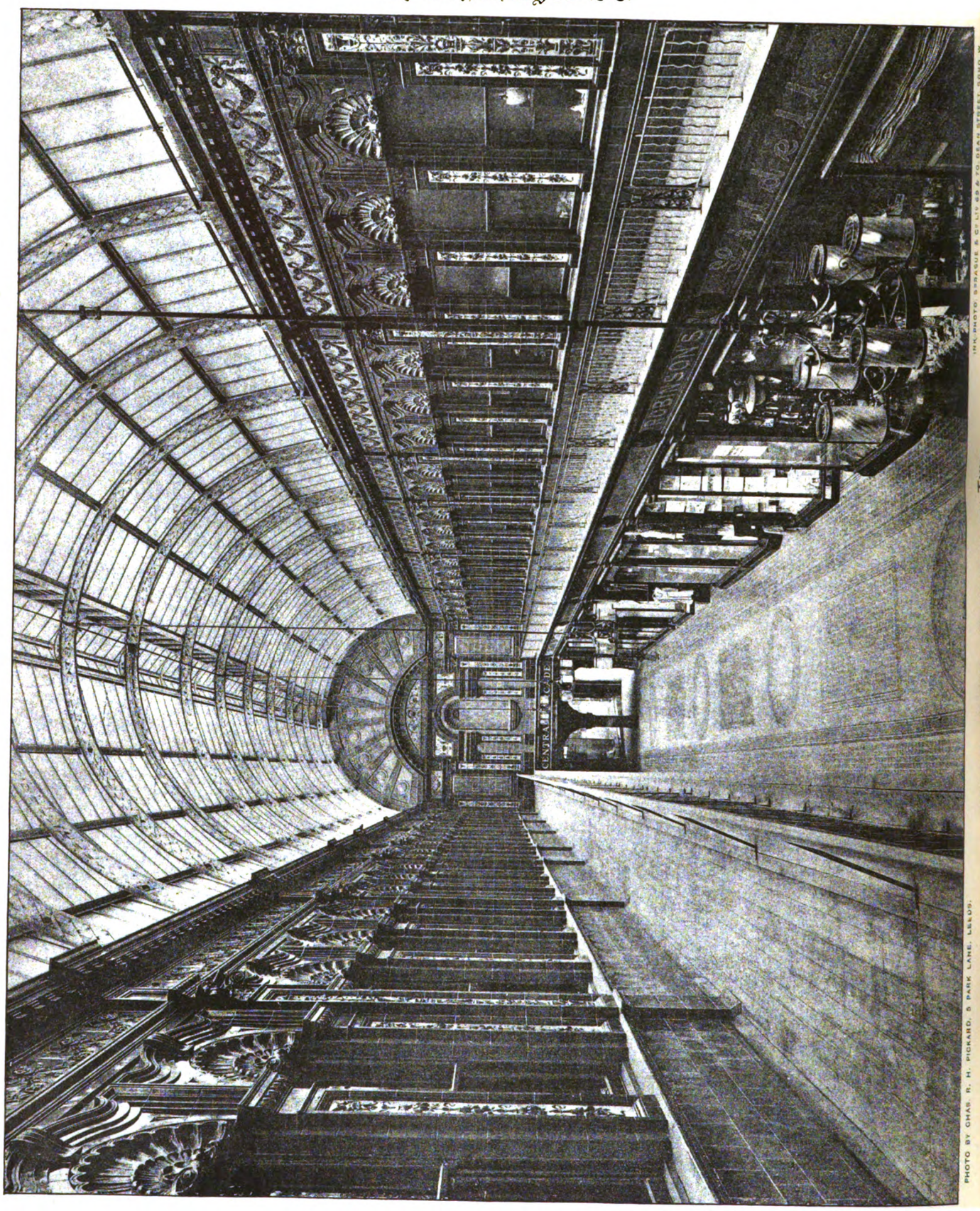
The Bishop of Durham recently dedicated a war memorial which has been erected by public subscription in the churchyard at Winlaton. It takes the form of a massive Celtic cross and base 15 feet high in black pasture stone from Chollerford, the same stone that the Romans used in their work there, and that of which the lantern and spire of St. Nicholas Cathedral are built.



Boldly sculptured in relief in the centre is the crucifix with panels of interlaced ornament down the shaft. On the base beneath the cross are the following words:—"Upon the Crucified One look, and thou shalt read, as in a book, what well is worth thy learning," and

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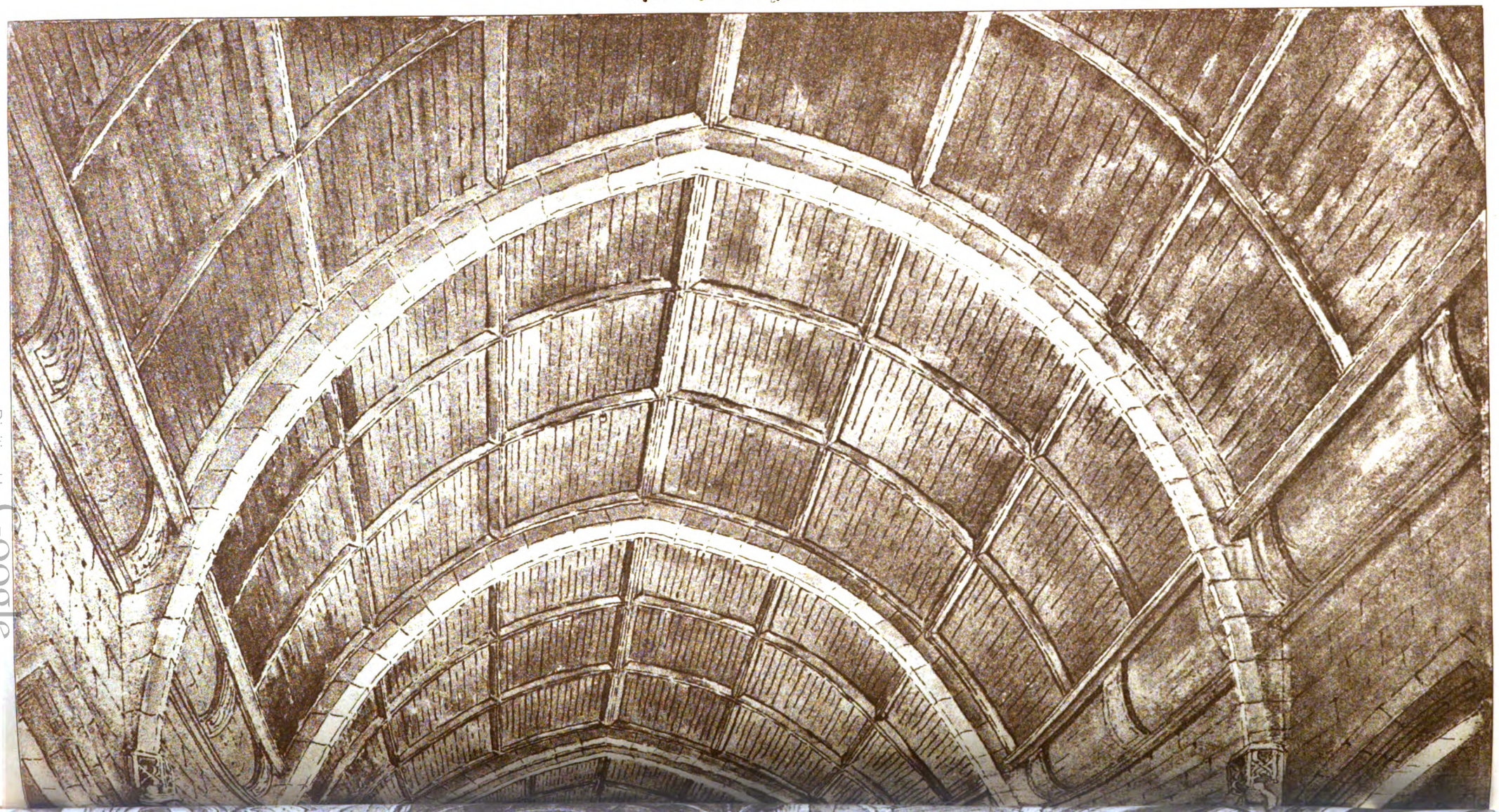
CENTRAL ARCADE NEWCASTLE-ON-TYNE.

PHOTO BY CHAS. R. H. PICKARD, 5 PARK LANE, LEEDS.

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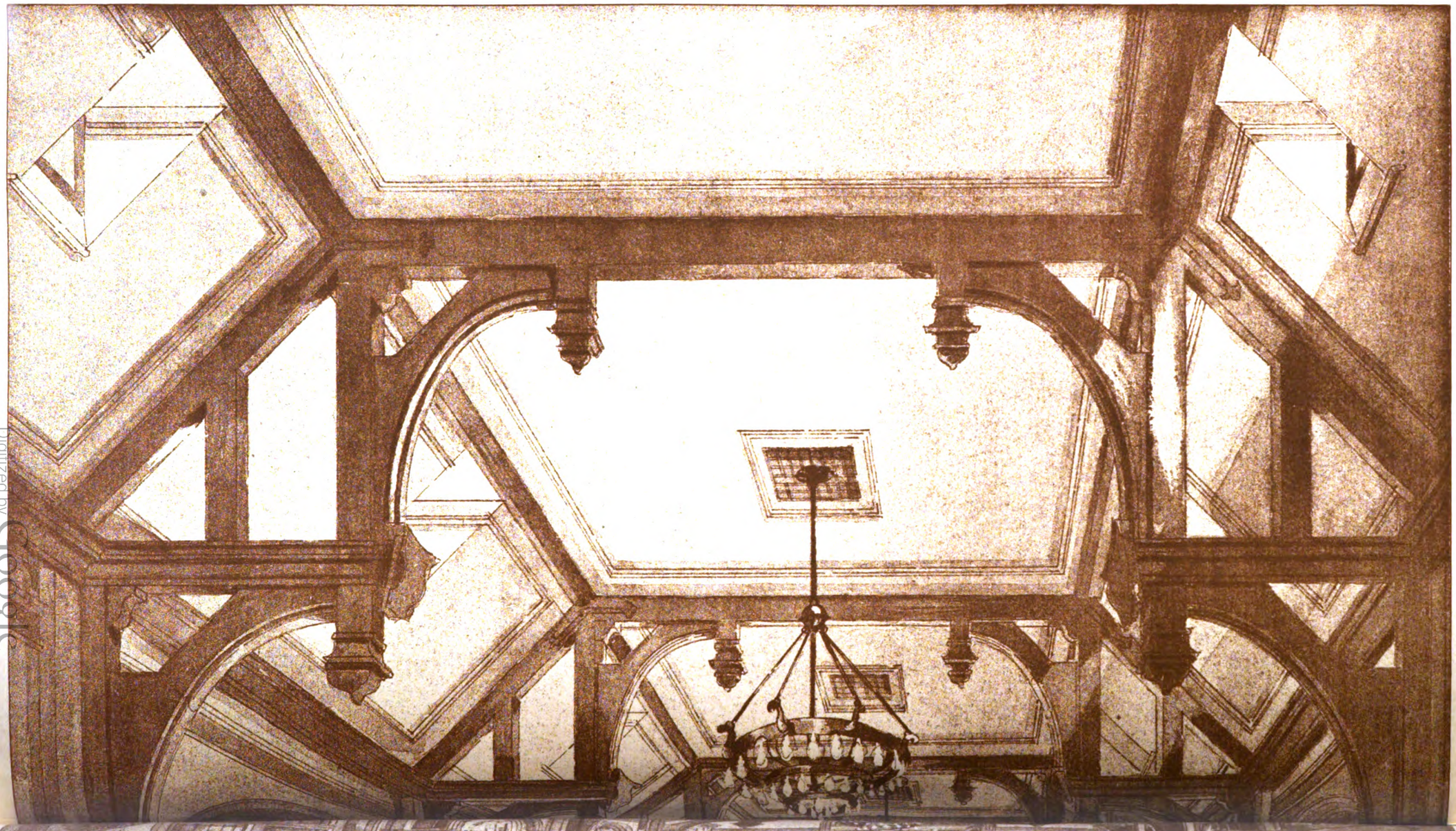
PROPOSED CHURCH.

MR. J. HATCHARD SMITH, ARCHITECT.

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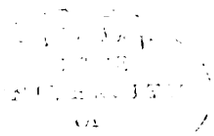


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POPLAR SCHOOLS, HUTTON, ESSEX. THE DINING HALL. INTERIOR.

MESSRS. HOLMAN & GOODRHAM, ARCHITECTS.

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"In memory of those who have given their lives for God, for King and Country, in the Great War, 1914." Messrs. G. Maile & Son, ecclesiastical sculptors, of Euston Road, London, carried out the work to the designs of Mr. W. H. Wood, F.R.I.B.A., of Newcastle-on-Tyne.

PUBLIC INTEREST IN ARCHITECTURE AND AN EMERGENCY CONTRIBUTION.

We often deplore the want of interest in architectural matters and sometimes couple it with reflections on the selfishness of mankind, and we think our readers may be interested in the following contribution sent to us by a boy of six who has shown a willingness to help us in difficult times, and also is already making a study of the architecture of Oxford. He has his life in front of him, and may in the future prove to be a second Wren, a consummation devoutly to be wished. We will make certain omissions which will preserve our correspondent's anonymity, as he may not wish his identity to be given away:—

"My article is finished now. I finished it this morning. I wish I had sent it earlier when * * * said that you had no Editor, but I think you said yesterday that he does not start till next week, so perhaps this is in time after all.

"St. John's College.

"St. John's College is a big building and it has three quads, there is the front quad, the Canterbury quad, and the new buildings quad. It has a very nice garden; in it there is a very big rockery which has many flowers; there are so many I cannot tell you the names, all I remember is that there are a lot, and there are the President's garden. And there's the library, the chapel and the hall.

"And there's Boles, the gardener, there are two lawns in the garden, and there's a horse roller to roll them with and there are a lot of chestnut trees and many trees and bushes.

"And there's * * * lecture-room in the front quad and there's Brooks who is the head porter. He is usually in the Lodge.

"When you go into the college you first come to the Lodge; then you go into the front quad; on the left hand side, in the corner nearest to the Lodge there is a passage and on the right hand side halfway down it there is a gate which leads to the Hall on the same side of the quad a little further down there is a door which leads into the Chapel; at the furthest end of the quad to the Lodge there's the President's House entrance and in the middle of that end of the quad there is a gateway leading to the Canterbury quad; on the right hand side in that quad there is the Library which has very many books and two globes in it and you go into the Library by an archway which has II. over it, when you have got to the archway you see some steps which lead to the Library.

"When you come out of the Library, you can get into the quad again and from that quad you can get into the garden by a back way from the Library stairs.

"There are some unmarried fellows who live in the College and some married fellows who live out of the College and in the New Buildings quad there are one hundred cadets now. In the other quad the unmarried fellows and the undergraduates live but very few undergraduates since the war—all the officers of the cadets are all married and they live out of the College. Everybody who comes there says the architecture is very good and all admire the stone frieze, the lawn, too, is much admired, and there are some very rare flowers on the rockery, which is the best in Oxford."

The reflections which occur to us after reading this letter are that we have been unduly hasty in appointing a new Editor, as we are quite sure that we could have continued without one with the aid of such contributions as this. Like Marsh Phillipps, the author of this delightful account has no rigid views on the importance of style, but prefers the human interest and association of the age in which he lives.

Correspondence.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Proposed New Public School Buildings at Bolton.

Sir,—Owing to national conditions, some of the competitors are finding a difficulty in completing their drawings, and have asked for further extension of time for sending in the designs.

The Trustees and Lord Leverhulme, being desirous of meeting the convenience of competitors in every way, have agreed that designs shall be received up to and including November 30, 1918, in place of September 28.

Clause 19 of the conditions of competition states "Drawings to be made on white paper of equal size."

It is desirable that this condition should be observed, but competitors may use their discretion in the matter if difficulty occurs.

John Bradshaw Gass,
Arthur John Hope,
Assessors.

19 Silverwell Street, Bolton: August 1918.

Competition Deposits.

Sir,—With the basic idea, which Mr. Guy Dawber's letter in your last issue projects for our consideration, I am fully in accord; for it is only too true that architects are unnecessarily imposed upon both by private clients and public institutions and authorities. All the same, audi alteram partem is a proper course to pursue. I do not think that the "small sum of one or two shillings," which your editorial comment suggests, would deter anyone from applying for particulars, and the failure to recover such a deposit would not prevent the frivolous application for the competition requirements, which it is the very laudable object of the promoters to ensure. And it must be remembered that it is customary to allow competitors a period of examination of these particulars, within which period the latter can be returned and the deposit recovered. It is then rather a question of degree than of principle; concede the justice of the latter and it is only necessary to determine what size deposit would be adequate to stave off frivolous enquirers and at the same time cover the promoters from unnecessary trouble and expense.

But where I am in sympathy with Mr. Dawber is as regards the forfeit of the deposit where a serious attempt is made, but for some cause the competition drawings are not completed; it would then be only justice for the competitor to be able to apply for the return of the deposit upon forwarding the incomplete scheme for the assessor's consideration and judgment, which, if favourable, should result in the recovery of a sum which should indeed only remain in the possession of the promoters where the assessor reports that no serious attempt at working out the scheme is in evidence.—Yours, &c.,

August 26, 1918. Percy L. Marks.

Conditions in Competitions.

Sir,—I am certain that every architect will welcome the letter in your last issue from Mr. Guy Dawber, and still more your footnote. The question of deposit, I am quite convinced, often deters an architect entering the ranks of the competitors. Particularly is this the case when the advertisement gives very vague particulars.—Yours, &c.,

Competitor.

London: August 26, 1918.

The New Editor.

Sir,—I notice that the new Editor is to take over control as from the next issue, and I would like to welcome him by a few words of commendation and a

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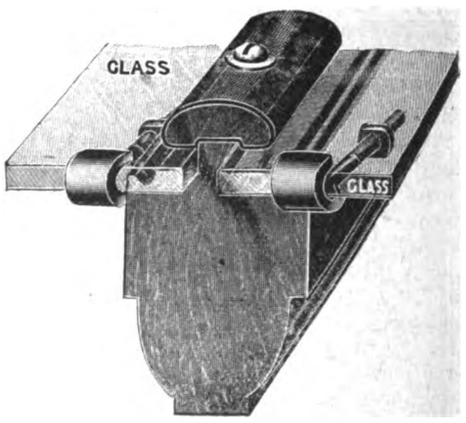
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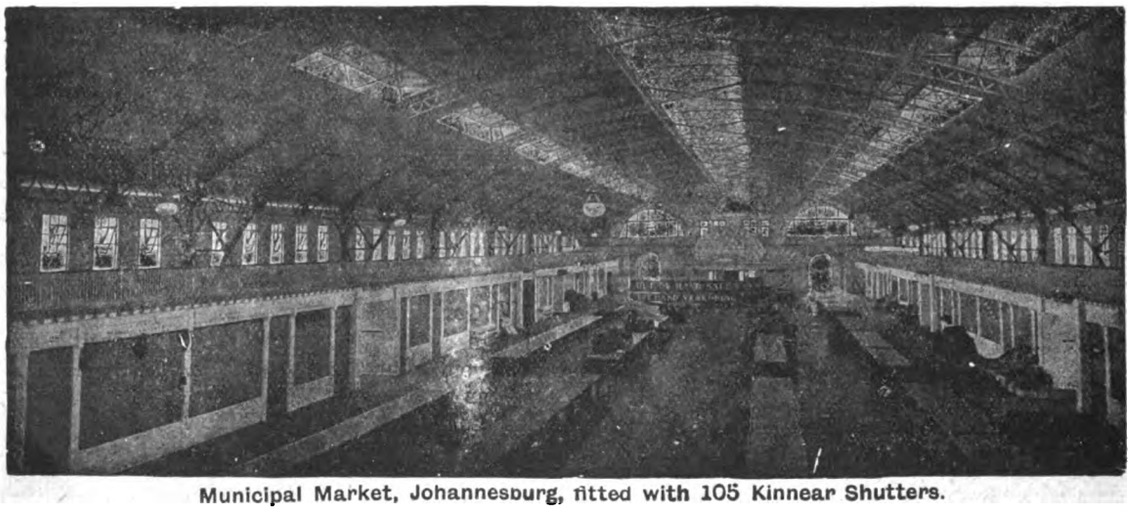
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few words of criticism, if you will permit me the space. I have been much struck with Mr. Wills' forceful articles during the time he was Editor of your contemporary; he has at all times, to my mind, exhibited a strong vitality in his writings, and has often given to his readers far-seeing views on future developments which have been invaluable to the profession. I trust that we shall, under the guidance of the new Editor, see "The Architect" steadily progress to the position of the principal Journal of the profession. For many years it has occupied a position of having, to my mind, its favourites, and there are undoubtedly men in the profession who have to thank it for very considerable advancement. Pardon me for putting the matter so frankly. Personally, under the new Editor, I feel there will be no favouritism exhibited, but first and at all times it will be the profession first and the individual after. Despite these last remarks, I have always had a high regard for the Journal, and in closing my letter would desire to wish continued prosperity and a still greater influence, and to see the Journal become, as I feel sure it will under the guidance of Mr. Wills, *the Journal* of the architectural profession.

Apologising for taking up so much of your space, yours, &c.,

A Subscriber to Your Journal 35 Years.

August 27, 1918.

[We thank our subscriber for his frank letter, and without any misgivings invite him to continue to read the Journal, and assure him the Editor will fear nothing if only his friends will at all times freely criticise the conduct of the paper. Frank criticism will be always welcomed.—Ed.]

Sir,—I have your letter of the 5th inst. I could write a letter to "The Architect" on the desirability of a column for professional legal matters, &c., and could I start it by saying that "I understand the editorship of that Journal has changed hands," and then make a few suggestions?

"The Architect" of June 14 last gave a capital report of what I said at the Society of Arts on "The Timber Industry," and I do not know that it appeared in any other Journal.—Yours, &c.,

Wm. Woodward.

18 Southampton Street, Strand, W.C.:
August 8, 1918.

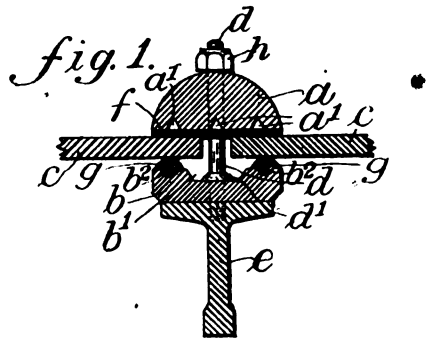
[We should be glad to have the views of any other of our readers.—Ed.]

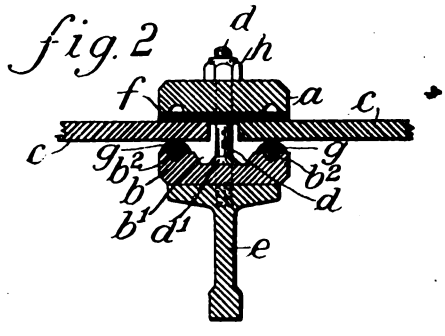
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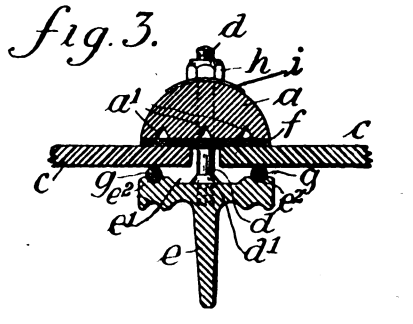
Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 116,803 (August 15, 1917).—Glazing Bars. W. H. Heywood, Bayhall Works, Huddersfield, Glazing and Roofing Engineer.—This invention relates to glazing bars for glazing roof structures without the use of putty, and has for its object the provision of an improved combined construction of bar comprising longitudinal bars composed of wood or wood fibre, one to form the cap or astragal above the sheets of glass, and preferably one to form a trough or channel below the sheets of glass, the said bars being secured to and supported by a longitudinal steel bar of T cross section, such construction eliminating the use of zinc and lead and providing a light and serviceable bar. Figs. 1 and 2 are sectional elevations. Fig. 3 is a sectional elevation showing a modified construction; *a* and *b* represent two longitudinal bars composed of wood or fibre, of which the bar *a* forms the cap or astragal above the adjacent edges of the sheets of glass *c* and the bar *b* forms a trough or channel below said sheets of glass, the said wooden or like bars *a*, *b*, being secured by stud bolts or screws *d* to and supported by a longitudinal steel bar *e* of T shape in cross section. The cap or astragal *a* is rounded or of arch shape in cross section, with longitudinal grooves a^1 to give a grip upon a strip of asbestos or felt *f* treated with bitumen and interposed between said cap and the upper faces of the opposing sides of the sheets of glass *c* to make a weather tight joint when the cap is secured firmly in position over same. The wooden bar *b* is hollowed out on its upper side to form a trough or channel b^1 and has near each longitudinal edge half circular recesses or grooves b^2 to receive packings *g* of asbestos to make weather tight joints







between the under surfaces of the sheets of glass *c* and the bar *b*. Through vertical openings formed at intervals apart in the cap *a* and the bar *b* are passed the bolts *d* which are screwed at their lower ends into the steel bar *e*, shoulders or flanges d^1 on said spindles engaging with the base of the channel or trough b^1 in the bar *b* and holding it firmly in position on the under side of the sheets of glass. Nuts *h* are screwed on to the outer ends of the spindles *d* to secure the cap *a* in position and hold it firmly against the bitumen or asbestos packing *f*. The same section of wooden or like bar employed to form the channel or trough below the glass sheets may be used in an inverted position to form the cap as illustrated at fig. 2. In a simplified construction the intermediate bar *b* is omitted, and a channel e^1 is formed on the steel bar *e* and also grooves or recesses e^2 to receive the asbestos or like packings *g*. The nut *h* is shown in this instance screwed tightly against a washer *i*.—July 3, 1918.

The Deeside District Committee, at their meeting held on Saturday, had under their consideration a letter from the Braemar Special District Committee in favour of the construction of a light railway from Ballater to Braemar, and a further communication from the Aberdeen District Committee suggesting the extension of the proposed Echt and Skene Light Railway to Tarland.

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THE ARCHITECT AND CONTRACT REPORTER

VOL. C.—2594. SEPTEMBER 6, 1918.

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New Conditions.

"THE ARCHITECT" has lost the services of an Editor who was universally respected and liked by the profession of which he was an honoured member, and we much regret that one who had done his duty in difficult and strenuous times should not have lived to see the dawn of the victory which will bring a longed for peace in its train, not only to our country, but to an embattled world. Editorial changes usually mean some readjustment of aims and policy consistently with the general carrying out of plans laid down in the past, but to these ordinary and smaller changes will be added those rendered necessary by the great readjustment which will be brought into being at the close of the present conflict, which has altered the conditions of many problems and brought others to the fore radically affecting relative values that we have been used to look upon as fixed quantities in the past.

Changes must usually be brought about gradually to be permanently beneficial, and, though it is our intention to effect alterations and improvements in "The Architect" as we feel may be necessary to render it of greater use to those who follow the art of architecture and the crafts of building, we do not propose now to specifically outline their exact nature, but to wait till the opening of the new year, and we will therefore only briefly allude to a few of the more important issues which must be discussed in the near future.

Most of us love power, and it is natural that those Government Departments which, since the outbreak of war, have exercised a semi-autocratic control and direction over building here, should be somewhat unwilling to contemplate the surrender of the ægis of control. It has been informally stated—with or without adequate foundation—that several of the Government Departments are anxious to continue the war control of building for a period of five years after the conclusion of peace, and such proposals may obtain support of the Socialistic element which sees in the limitless extension of bureaucracy a means of carrying out pet nostrums and of attacking private interests and property. On the other hand, the nation as a whole, and the great body of those interested in building, must oppose with all their power of organisation the continuance of conditions which have only been acquiesced in because of the present crisis, and which have been instrumental in placing many men and many callings in a dangerously insecure position. This is, we hold, the most important and urgent problem to be faced by the country at the end of the present conflict.

The war has revealed our weaknesses and shown our strength, and one of the weaknesses revealed has been that of the status of architects and builders. Architects have seen their claims to recognition passed over in favour of those of men of other callings; contractors have suffered by the disposition shown by the authorities to deal with questions of labour without taking the advice of a body of men possessing the advantage of close personal experience of the questions at issue. The remedy in both cases lies in better organisation and education, which will emphasise the important bearing which questions of building have on the life and happiness of the whole population. The architect of the future has to make good his position as an important and necessary factor in the body politic, and not, as he is too often regarded, as a man whose services can be dispensed with by those requiring help in the solution of practical problems.

The question of housing has been forced by the action of enthusiasts, aided by a good deal of political propaganda, into a position of much prominence. Its relation to broad economical problems has been largely forgotten by those who have ulterior political views, who would have us believe that while all other classes in the community have to pay for what they want, the needs of the working classes should be met by a system of State subsidies. The fact that wages could be enormously increased by the encouragement of production, and when so increased would place the working classes in a position to pay for what they should have, is too often overlooked. We see no reason why the increased cost of building should not be allowed to affect the value of rents, because wages will automatically rise—if they have not done so already—in order that the difference may be made good.

The Government have taken a wise and necessary step in promoting Joint Committees of various trades, and, as a popular novelist states, we may live to see the happy day when each trade, composed of employers and employees, will act as a well-defined and harmonious entity comparable to a city or other corporate body. There should be an end to the friction between what should be regarded as the different parts of a machine devoted to the increase and maintenance of production.

Those who have fought and died to preserve this country from the attacks of the most unscrupulous autocracy whose record has ever darkened the pages of history, have a right to expect that we who have remained at home should do our part in helping to make the world a better place for the generations which are to come than it has been in the past.

Architects have perhaps been overlooked because they are too often isolated from the broader considerations and interests which move their fellows, but the war which has altered so many things has given us a broader view of the duties of citizenship, the understanding of which should be achieved by all of us.

Class distinctions and misunderstandings have been obliterated in the trenches of a hundred battlefields and replaced by broader views of life and of duty, and it is not too much to hope that the lessons of the war will have demonstrated to those who follow the craft of building, whether as architects, contractors, or workmen, their mutual dependence on each other. Just as party faction has been replaced by patriotism, so mutual distrust between those who have a common object, the promotion of the craft of building, which is infinitely more important than any sectional interests can ever be, must in the future be eliminated.

We do not want revolution, but do emphatically need that broader understanding and sympathy with all sections of men which can only be brought about by the just recognition of the claims of every section of the people, and the acknowledgment of the fundamental truth that the wealth and prosperity of the whole community can be immeasurably increased in the future by national effort and national patriotism will constitute an immensely greater possession than the accumulated wealth on which Socialism would like to lay its predatory hand.

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Notes and Comments.

The Scope of "The Architect."

The architect of to-day is the heir of the master builder of the past, and the limitation of his functions to those of design and superintendence should not blind him to the fact that his work can only be executed with the help of a number of executants who fall under the various heads of contractors, sub-contractors, and master craftsmen. More and more if architecture is to be a living force as it was in the centuries of the past must the architect learn to work in close association and sympathy with the men by whose efforts alone his conceptions can be realised. We want to draw nearer men, and the understanding of men, rather than to concentrate our attention on the products of the drawing board, and we need the sympathy and understanding which will enable us to appreciate good work produced by very varying methods. We shall try in our pages to represent the best work of all schools, whether traditional or eclectic, and hold that the architect's province is a wide one, touching great engineering problems on one frontier, and furniture, decoration, painting, and sculpture on the other. It covers, in fact, a wider range than almost any other calling and, as far as opportunity permits, "The Architect" will try to include in its compass the arts, crafts, and science which is included under the general title of constructive and decorative design.

A New Administration.

"*Le roi est mort, vive le roi,*" is true in the conduct of a paper as in other phases of life, so that the first duty of a new Editor is to meet the engagements of his predecessor, and it is only after the passage of a little time that the trend of a new administration can be made apparent. We hope that "The Architect" will secure new friends and fresh support, but that in doing so it will not lose any of its former friends. It is a new Editor's duty to give special consideration to those who have aided his predecessor and given him valuable help and assistance, for such services are not only personal ones, but are given to a Journal which, unlike any person, has the vitality best described in the legal phrase "perpetual succession." We hope that our readers will favour us from time to time with both correspondence and criticism, which will be always welcome, for it is human to err, and it is also said with truth that "outsiders see most of the game." We do not suppose we shall be able to agree with every criticism made or to adopt every suggestion offered, but criticism and suggestion will always be taken in good part and considered as an evidence of the friendliness of those who read our pages.

The Architect as a Man of Business.

The valuable suggestions which have been made elsewhere by Mr. John Murray, and which are under consideration by the Royal Institute of British Architects, would do much, if acted on, to remove a cause of complaint against architects to the effect that they are not, as a rule, competent men of business. The architect's *rôle* should be that of a useful and necessary agent in the fulfilment of the practical wants of mankind. He should know how to build, to make the best use of a site, and to act as his client's trusted adviser in complicated matters of business; and, lastly, he should understand the financial problems which underlie most building projects. He can master this knowledge without sacrificing his ideals or losing his power of investing his work with beauty, while the general acquisition of greater knowledge of practical essentials is more likely than anything else to bring him into contact both with work and friends. Mr. John Murray has done a great service to the profession in giving them the result of years of careful thought and observation on a most difficult and complicated problem with which he is brought into daily contact in his official capacity.

Stocktaking.

On going through a number of illustrations arranged for by our late Editor we find that we have illustrations which would be sufficient to cover the inset illustrations for nearly three months, so that until the New Year we may often be precluded from giving subjects which we should otherwise like to illustrate in the next few months because of their intrinsic or topical interest. It is necessary, in times like those which we are passing through, when everyone is short-handed, to make provision for emergencies which may occur, and we only make this explanation, as otherwise our readers may imagine the fact that we do not immediately illustrate work of present interest to be due to the fact that we are not abreast with the times. With the New Year we hope to be able to formulate and carry out a policy which will make "The Architect" more useful and interesting to those who are living in the midst of a great era of change in which old conditions and methods will be largely obliterated. There will always naturally be two great divisions of illustrated matter: the first, the work which is of permanent value because of its merit; the second, work of immediate topical interest; and our object will be to balance the work of these two divisions fairly.

Private Enterprise and Housing.

Mr. A. W. Shelton, F.A.I., of Nottingham, gave a short address at the Aldwych Club on the peril of adopting the standpoint that it was necessary to provide accommodation for the working-classes at uneconomic rents. While admitting that it was necessary for municipalities to clear away slums and to undertake the housing of the very poorest classes in the community—a section which we trust will be a diminishing factor—he stated that not more than 10 to 15 per cent. of the population came under this head. The remainder, he said, were well able to pay economic rents, and there was no more reason why they should be provided with houses under cost price than presented with trousers or anything else they wanted. He emphasised the necessity of repealing Part I. of the Finance Act of 1910, and thus restoring confidence, and he said in conclusion that he had reason to believe "that a scheme has recently been submitted to, and is now under the consideration of, the Local Government Board, which is in effect a partnership between the State, the local authority, the building society, and the tenant. It provides for the building of houses by private enterprise at a price which will give the builder a living profit." We hope that such a scheme will receive fair consideration, though we are afraid that the action of our Government may be deflected as it often has been by the conviction that a large mass of voters may be appealed to by the promotion of schemes which are neither financially sound or equitable.

A Peace Cross at Liverpool.

Mr. Arthur Earle, who has been one of the most liberal of donors to the new Liverpool Cathedral, has given a donation of £2,000 to cover the cost of the erection of a large granite cross, over 30 feet high, in the precincts of the cathedral, to commemorate the conclusion of peace. The steps and space round the cross may be used for the preaching of all denominations but not for political meetings, subject to conditions to be decided upon. The gift is vested in the hands of four trustees, the donor expressing the wish that the Lord Mayor, the Bishop, the two Archdeacons, and the City Surveyor and Engineer should be consulted: We should have thought it more to the point had provision been made that the architect of the cathedral should be consulted and his advice taken, but we have no doubt that this will be done, for even the public must recognise that in Mr. Gilbert Scott the community have the service of a man of unusual gifts. It is indeed not too much to say that Liverpool need not regret the absence of a mediæval cathedral, as it has secured in a modern building one of the finest in the world.

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THE CITY COMPANIES AND THEIR HALLS.*

LIKE the Creation of the world, the origin and early history of the guilds which subsequently formed the City Companies is shrouded in obscurity, but, unlike the Creation, we have no Book of Genesis to tell us how and when they were first formed. We know that the earlier of them are the first voluntary associations recorded in the history of our race, and that they have been one of the greatest factors round which our municipal life and trade has grown.

For long they were the only philanthropic and charitable organisations outside the Church, and before education had become a concern of the State their members had left bequests which have been the foundation of some of our greatest schools.

They have contributed both men and money to the service of the State—money for the most part, which has never been repaid. They have performed many of the functions of police, and when, through the changed conditions of modern life, the trade control which they once exercised was abrogated, they proved their adaptability to modern conditions by performing duties no less useful in the public interest than those which they carried out in past centuries.

Guilds have existed in almost all civilised countries, and were once very numerous in Western Europe and in the cities and towns of England, but very few of the English provincial guilds exist to-day as active organisations, the Brethren of Trinity House of Newcastle-on-Tyne and the Merchant Adventurers of Newcastle and Bristol and a few others being exceptions to the rule; but previous to the passing of the Municipal Reform Act of 1838 the guilds of Newcastle and some other cities selected the municipal governing body, and it is only in the City of London that the old association between the Companies and municipality has been retained to the present day.

The Weavers', Saddlers', Girdlers, and other of the London guilds existed before the Conquest, and the Weavers are said to have obtained their first Charter in the first year of the reign of Henry I.; but few of the principal guilds obtained the legal recognition implied in incorporation before the reign of Edward III., while a majority of them received charters from the Crown at a later date. Such incorporation was more a sign of their growing importance than their antiquity, for there is ample evidence of their existence long before they obtained the formal recognition and legalised powers defined in their charters.

With the exception of the later Companies of Stuart times, which were often monopolist associations in disguise, they were originally fraternities of those following some calling who joined together to perform common religious rites in honour of patron saints, to feast together upon anniversaries, to obtain mutual protection, and to relieve the wants of their poorer brothers.

The head of each guild was in early times called the alderman or warden, while in the case of the Merchant Taylors there is evidence that he was called pelegrinus, or pilgrim, doubtless because he performed some pilgrimage on behalf of the members of his guild. At a later date the head of the fraternities was entitled the master, or in some instances the prime warden. The charters granted to each Company prescribed rules for the election of officers, and gave the sanction of law to the customs which had proved necessary for the organisation and control of the craft, the right to hold land in a corporate capacity and a defined area in which they could exercise jurisdiction.

Three classes of members always seem to have existed. Firstly, those who possessed the freedom of the Company but had no share in its government. Secondly, those who were entitled to wear the livery or distinctive dress of the guild from whom the governing body was chosen. Thirdly, the court of assistants who formed the governing body, presided over by the master and warden.

Admission to the guild was, firstly, by apprenticeship or servitude; secondly, by patrimony; thirdly, redemption or purchase; and, fourthly, by gift, the last being honorary.

The continued existence and vitality of the City Companies of London is closely connected with the custom of patrimony which has always obtained. Elsewhere, where the membership of the guilds was limited to a specific occupation, as was the case abroad and often in the provincial Companies, such bodies have died out in consequence of changed conditions of industry. In the same way the Salters, Girdlers, and many London Companies would have died out, whereas their ranks have been filled with men of other occupations. To the man whose family was not famous or illustrious membership of a guild gave a wider range of interests and a pride in common associations often stretching back for many centuries. Every member might aspire to filling the higher offices of his Company, and whole families have for hundreds of years been associated with particular Companies. All attempts directed towards the narrowing down membership proved ineffectual, and the Companies became what they are now, a reflection and exemplar of the great City of London, whose commerce is world-wide and whose leading citizens are always a mainstay of any great movement of national importance. Loyalty to their fellows, good fellowship, and the promotion of charity and education have always been inculcated within the ranks or bodies which have done much for the service of our country.

In many of the Companies the freemen who became numerous in proportion to the classes who held power agitated for more representation, and frequently appointed officers of their own, forming a semi-independent body within the Company, but this movement died out in later years with the growth of modern conditions. The freemen are frequently referred to as the Yeomanry.

The masters of the older Companies are thus the representatives of a system of organisation which has remained unbroken for a period longer than that of any dynasty which has reigned in Europe, and descends to us from the dawn of English history.

The existing Livery Companies of the City of London are over eighty in number, of which the first twelve, viz., the Mercers, Grocers, Drapers, Fishmongers, Goldsmiths, Skinners, Merchant Taylors, Haberdashers, Salters, Ironmongers, Vintners, and Clothworkers are termed the Great Companies, and the remainder the Minor Companies, a distinction which though recognised for several centuries only partially corresponds with facts. Many important Companies such as the Merchant Adventurers and Merchants of the Staple, have become extinct, while in other cases Companies have been united to one another or have been split up into two or more Companies.

The Grocers were formed out of the Pepperers and Spicers, and in the times of James I. gave birth to the Apothecaries' Company, much to the disgust of the parent organisation. James I., who took the Apothecaries under his especial patronage, answered the Grocers' protest by the remark "The Grocers who do protest are but Merchants." The Surgeons seceded after many struggles from the Company of Barber-Surgeons, which was reconstituted as the Barbers' Company, the Shearmen and Fullers were united as the Clothworkers, the White and Brown Bakers as the Bakers, the Fishmongers and Stock or Salt Fishmongers as the Fishmongers, while the Glovers, Pursers, and Pouchmakers were all swallowed up by the Leathersellers, the process of digestion being in this case an entirely happy one.

The Companies were in the past as jealous of their order of precedence as the most exacting lady of her position in a Court function, and the order which was finally determined was as rigid as the laws of the

* A Paper read at a meeting of the London Society on June 5, 1917, and also given at St. Paul's Chapter House on February 14, 1918, and before the City Livery Club at St. Bride Institute on May 23, 1918, by Mr. H. W. Wills, F.R.I.B.A.

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Medes and Persians. There are many historic anecdotes of the struggles between the Companies in the past, some of which ended in strife and even bloodshed. The Skinners and Merchant Taylors both claimed the sixth place and referred their dispute to the Mayor, Sir Robert Billesdon, in 1484. His wise adjudication was that each Company should have precedence over the other in alternate years except where the Mayor belonged to either Company, in which case his Company should take precedence irrespective of the order of rotation. Each Company was to dine at the other's Hall on their respective feast days, a custom which has always been observed. Sir Robert was evidently well fitted for his position as Chief Magistrate of the City.

The Dyers had been the twelfth Company before the Shearmen and Fullers were amalgamated, but it was ordered in 1516 that "The fellowship of Dyers should charitably and lovingly follow next the Wardens and fellowship of the Clothworkers in all processions, goings, standings, and ridings without any further strife or debate." The Dyers protested, but without avail, and so became the thirteenth Company.

The importance attached to the order of precedence is more easily understood when we consider the great place which ceremonies of various kinds held in the life of former ages, which reached its height in the Stuart era, and of which the Lord Mayor's Show is a survival. On one of these occasions the Grocers spent £900, which might correspond to some £5,000 to-day. Part of this sum was expended in dresses and some went to provide 500 loaves of sugar, 36 lb. of nutmeg, 24 lb. of dates, and 114 lb. of sugar which was distributed to the happy citizens by those who rode on camels and griffons.

The Fishmongers gave a great pageant in 1616 to celebrate the mayoralty of Sir John Lemon, one of their members. It was divided into eight sections. The first represented the Company's fishing buss, which was shown on great occasions, in which there were three fishermen; one of them cast a net while the others threw live fish to the people. The second scene showed the dolphin, which forms a part of the Company's arms, with Arion on its back. In the third the King of the Moors, mounted on a golden leopard, threw gold and silver, and he was followed by three tributory beings. The next showed a large lemon tree, which symbolised the Lord Mayor, while a pelican feeding her young with her blood symbolised the cherishing love borne by the Mayor to the citizens. The children underneath the tree represented the five swans, and also the flower, fruit, rind, pith, and juice of the lemon.

In the fifth scene a note of tragedy was struck. It represented six horsemen in armour, the first with Wat Tyler's head on a spear; behind him followed a merman and mermaid in heraldic costume, drawing the Company's chariot, in which was Richard II. seated at the feet of his guardian angel, and surrounded by eleven Royal visitors.

The climax of the pageant was staged in St. Paul's Churchyard, where a goodly bower was provided, adorned with the escutcheons of those Fishmongers who had served the office of Mayor. In this bower five mounted knights, six trumpeters, and twenty-four halberdiers guarded the tomb of Sir William Walworth. As the Lord Mayor approached, London's genius, shown as a comely youth with a golden crown, awoke Sir William, who shed tears of joy at finding the office had lost none of its importance. He then congratulated the Mayor on being the second unmarried Mayor, and proceeded to give a description of his tomb in verse.

In addition to the Lord Mayor's Show, the Companies had to provide processions whenever the king visited the City; many of them kept state barges for water pageants and processions, in all of which ceremonial observances the standing of the Company was a matter of much importance.

In early times the functions of the guilds were chiefly religious and charitable. They had to attend the funerals of the brethren and "sisterca," and in some cases their marriages, under pain of a fine, and contributed payments termed quarterage for the common use.

The bequests left for the maintenance of religious services and for candles, which were designated "superstitious usages" at the time of the Reformation, were abolished, and the Defender of the Faith, who determined to ease his subjects' consciences, confiscated all lands on which there was a charge for such practices. The Companies were then forced to buy back the property from the Crown at the rate of twenty years' purchase, and often had to sell other lands to provide the necessary funds.

As time went on and the craft element became more powerful, very strict regulations were drawn up for the control of trades, and the prevention of "false work" and adulteration. Naughty apprentices were frequently whipped in the presence of the Court, and it is recorded that one John Rolls, a draper's apprentice, was brought before the Court, and the case being proved, "two tall men, their features concealed by hoods," entered the room, "with two peneworth of birchen rods, and withouten any word speaking, they pushed off the doublet and shirt of ye said John Rolls, and there upon him (beying naked) they spent all ye said rodds for hys said unthrifty demeanor." Where it was on the contrary proved that the apprentice was underfed or otherwise ill-treated, the Court would, after proof, transfer him to another master.

The number of apprentices a man might take was limited according to the rank he held in the Company.

The prevention of fraud was rendered easier by the localisation of trades in mediæval London; the Goldsmiths were not allowed to work in obscure lanes or behind closed doors, night work was generally forbidden. The Vintners might not hang cloths over their cellar doors, and if they sold sweet wine might not sell any other kind. Searchers or viewers were appointed to inspect goods sold, and in case they were defective, fines were inflicted, half of which went to the Company and half to the City.

Butchers selling bad meat had the carcases burnt under them, bakers who sold bad bread, or bread short in weight, were drawn on a hurdle from their houses to the Guildhall through the dirtiest streets. A second offence was treated in the same manner, with the addition of the punishment of the pillory, while if they offended a third time their ovens were pulled down and they were forbidden to pursue their trade in the City.

Quaint as were some of the customs, they were effective for centuries, and were the means of keeping up a high standard.

The barber who practised surgery, and took patients into his house, might not shave customers nor might he exhibit a bowl of blood in his window to advertise his skill in the art of medicine. The Companies were called on to provide and arm men for national purposes, and also to provide men for the City watch. The storage of corn to provide for times of shortage was another of their duties.

The procedure in these matters was that certain demands were made in the City and then divided between the Companies in proportion to their wealth and position.

The calls for money were frequent under the Tudors, but the Stuarts expanded the system into a fine art, while under the Commonwealth the same demands were clothed in pious phraseology. The Ironmongers protested their inability to meet a call in 1643, and were informed "that the Company's part of the last £50,000 was to be raised for the preserving of their libertyes, their lives, and the Gospell of Jesus Christ, which was more deare than all the reste." Frequently the Companies were forced to part with their plate to obtain funds, and the loss entailed by the Great Fire was the culmination of a long record of misfortunes.

Nothing could exceed the benevolence of our kings when dealing with the moneys of others, and when James I. determined on forming a plantation in Ulster out of the escheated lands of the rebels, he at once summoned the City to take up the project. An Irish Society was formed, and the twelve leading Companies

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associated with the minor Companies. They were first asked to find £20,000, but ultimately this sum was exceeded by five times, and Charles I. endeavoured to obtain additional money by forfeiting the Society's Charter, one of the complaints made being that the Companies treated their Irish tenants too kindly. Ultimately, the estates were sold, mostly under the provisions of the Land Purchase Acts of the eighties, but in the intervening years the county of Londonderry had been converted into one of the most prosperous districts in Ireland without, it may be said, any advantage accruing to the landlords. This, though the principal, was only one of many public ventures financed by the Companies at the request, or rather command, of the Government.

Since the time of the Stuarts the Companies' history has been uneventful, and when the rise in value of City lands placed many of them in a position of comparative affluence and modern conditions had rendered their trade regulation obsolete, they have again rendered service to the community willingly and without external pressure, not only from the proceeds of their trust but very largely out of their corporate estate.

The Mercers administer two great schools, St. Paul's and Mercers' Schools. On the former they have expended over £100,000 in land and building. The Grocers' Company have spent over £150,000 on their great school at Oundle, the Drapers over £280,000 on the East London College, the Fishmongers over £100,000 on their school at Holt, the Skinners £100,000 at Tonbridge School, and the Merchant Taylors very large sums on the great school they support. The City Corporation and the guilds have contributed nearly a million pounds to the building and endowment of the City and Guilds Institute, and this represents only a part of the beneficent work done in which almost every Company has taken part according to its means, some of them devoting money to general education and others to the more technical branches connected with the crafts. When Dean Colet was asked why he left the management of St. Paul's School to the Mercers, his reply was that he knew "there was no absolute certainty in human affairs," but he "found less corruption in such a body of citizens than in any order or degree of mankind," a result confirmed in less picturesque phraseology by the findings of the Commission appointed to inquire into the Companies thirty-five years ago. The records of the Grocers' Company show that its existence was saved after the Fire by the personal exertions and private liberality of its members in order, as is stated in a minute dated 1687, that it "might again become, as it once was, a nursery of charities and a seminary of good citizens."

Associations which like the Companies have preserved their vitality through the changes of centuries have earned their right to that perpetual succession sanctioned by successive charters which have their place in the history of England.

In dealing with the Halls of the various Companies, it will be best to adopt a chronological method, selecting illustrations with that object.

We have few trustworthy illustrations of the Halls as they existed before the Great Fire, and most of those which then escaped have since been rebuilt. The Barbers' Hall was rebuilt thirty years before the Fire under the direction of Inigo Jones. Leathersellers' Hall, Carpenters' Hall, and Ironmongers' Hall, with others, which escaped, have since been rebuilt. The probable appearance of some of the earlier buildings may have been much like the Hall of the Merchant Adventurers of York, which still remains, but in a large number of cases they were private houses which had been left to, or bought by the Companies.

In all there are thirty-five Halls now existing in the City of London; some of the remaining Companies never had Halls, while in other cases their Halls have been demolished or sold. The plans of many of the Halls follow mediæval lines, being blocks of buildings grouped round a courtyard approached from the adjacent street through an archway. Comparatively few of them have frontages to the street which, when belonging to the Companies, was frequently let out to obtain revenue.

The second Hall of the Leathersellers' Company, which was only demolished at the close of the eighteenth century, and has been fully shown on old engravings, gives a good idea of the appearance of an earlier Hall. It formed a part of the Benedictine nunnery of St. Helens acquired by the Company in 1543 after the dissolution of the religious houses, and was subsequently adapted and altered by the Company. In its courtyard was a curious old pump erected in payment of a fine inflicted on a member of the Court. The demolition of this building was due to its state of decay, coupled with the fact that its position stood in the way of the development of the St. Helens estate.

Barbers' Hall now consists of a very beautiful court room with a lantern over an old staircase and a few smaller rooms; the quaint hooded doorway which previously fronted the street now forms a part of the inner doorway fronting the courtyard.

Although Merchant Taylors' Hall was destroyed, evidence has been obtained in recent years that it is rather a reconstruction of the former mediæval building than a new Hall. This was made evident by the discovery of a fifteenth century recess with fan tracery on the north side of the Hall, which with its slightly altered kitchen and a small vault under part of the building, belong to the Gothic era. Merchant Taylors' Hall contains some fine rooms of the Stuart era, but parts of the building have suffered through injudicious addition and restorations.

Mercers' Hall was rebuilt after the Fire from designs by Jarman, the City Surveyor, of the work of that date. The Hall and Chapel which replaced the Church of St. Thomas of Acon, in which the Mercers used to worship, remain together with a colonnaded Hall below. The court room is somewhat later in date, and the remainder of the buildings are modern.

Brewers' Hall is the most complete of the halls of post-Fire date, and is practically untouched. The architect employed was one Mr. Whiteing, but the builder, Captain Caine, is the hero of the story. His tender for the building was £3,523, as against £3,443 submitted by a Mr. Ball. Both were persuaded to offer to carry out the work for £3,300 and were then asked if they would give £3,000 for old materials, on which they asked leave to withdraw their tenders. Captain Caine was ultimately selected, and carried out the work so satisfactorily that he was made a Brother of the Company. The architect disappears from history. The same Captain Caine was asked to submit a model for the rebuilding of Tallow Chandlers' Hall, and, the surveyor to the Company dying, was elected to fill the office. The buildings facing Dowgate Hill were carried out directly by master tradesmen, and the Company dealt with a plasterer for the ceiling of the Hall, though Captain Caine was allowed to check the accounts. The very beautiful court dining-room shows that the Tallow Chandlers were well advised in their choice, and the £20 they paid the captain for his care and diligence appear to have been well earned.

The Pewterers rebuilt their Hall after difficulties which even in a bad time were exceptionally great. To obtain money they gave any of their members who would pay a small sum the right to put up their escutcheons in the Hall, which for the present forms part of a warehouse. The very interesting ceiling over the adjoining masters' parlour was carried out directly by the plasterer, who submitted a model of it to the Court.

Skinners' Hall is one of the most beautiful and interesting of its period, and contains many fine rooms besides the Hall, which is decorated with Brangwyn's mural paintings representing the conflict between the Skinners and Merchant Taylors.

The Haberdashers' Hall is attributed to Wren, but has been considerably altered and modernised. Its finest feature is the court room, with its elaborate plaster ceiling, on which are displayed the arms of the Compan

The Vintners' Hall contains one of the finest rooms

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in any of the halls, which forms the Company's court room and is marked by great beauty of detail.

Girdlers' Hall, sometimes attributed to Wren without sufficient evidence, is most interesting, the Hall containing a very fine screen, and the court room and staircase being good examples of the work of the period.

Painter Stainers', Stationers', Apothecaries', Innholders', and Coachmakers' Halls all belong, approximately, to the same date, and both the Stationers' and Apothecaries' Halls contain very fine rooms, and Apothecaries' Hall a most picturesque courtyard. Innholders' Hall has been partially reconstructed, but with great skill, so that its characteristic features have been carefully preserved. Coachmakers' Hall was formerly the Hall of the Scriveners' Company, and was reconstructed in recent years, the old woodwork being preserved and reused. Painter Stainers' Hall is an exceedingly picturesque and pleasing building. The halls mentioned are the work of a period when the influence of the master craftsman was still strong and when the design of detail was left largely in his hands. The following halls, which will be mentioned, are the direct work of architects at a time when the influence of the craftsmen had in a great measure died out.

Ironmongers' Hall was rebuilt in 1747, possibly on old lines, as its plan shows very noticeable irregularities. The entrance hall is a most picturesque feature, and the livery hall over, which was redecorated a hundred years later, is a very interesting and by no means unsuccessful example of an attempt in an Elizabethan manner.

Salters' Hall was built in 1823 from designs by Henry Carr. It is characterised by refinement of detail and dignified and symmetric arrangement, and in it we have the conception of a City Hall as a balanced architectural composition.

Fishmongers' Hall was built in 1831, the architect being Henry Roberts.

Goldsmiths' Hall was built from designs of Philip Hardwick, R.A., and is a very fine and dignified building. The Duke of Wellington was present at the banquet held to commemorate its completion in 1835, at which the Prime Warden was able to state that it had been completed without causing the curtailment of any of the Company's numerous charities.

Armourers' and Brasiers' Hall was built in 1839 from designs of Joseph Henry Good. It is a simple building of considerable dignity and pleasing proportions which replaced an older brick building on the same site. The very pleasing little Hall of the Wax Chandlers in Gresham Street was built from the designs of Charles Fowler in 1852.

Clothworkers' Hall was rebuilt about 1850 from designs of Robert Angell, the plan and arrangement being ample and dignified, while the Hall is well proportioned and effective in character.

The final group of halls to be noticed includes those built in the seventies and subsequently, and among them is the Drapers', which, though the work of an unfortunate epoch, has an inner courtyard of very pleasing proportions and considerable dignity, and a spacious, well-proportioned livery hall.

Carpenters' Hall was rebuilt at about the same time, and, though over-emphasised, is a building possessing qualities of dignity. The Cutlers' Hall is a pleasing little building designed in the Tudor manner, while the Grocers' Hall, though not wholly satisfactory, contains a good staircase and court room.

Curriers' Hall is an interesting little building designed by Messrs. J. & J. Belcher in a Gothic manner, and the Cordwainers' Hall was rebuilt from designs of Chatfeild Clarke in 1909.

The City halls are not, like the Italian palaces, the work of princes and nobles able to spend enormous sums on building and aided by the greatest artists of a notable epoch, but the homes of communities which for the most part have endured through times of great stress and difficulty, and which have only comparatively recently reached a period of financial equilibrium, but it will readily be admitted that they are, with the churches, the greatest features of interest in the City of London, which, we must hope, will be preserved for future generations.

It is fortunate that the Companies have held an intermediate position between public and private bodies. If the halls had been public buildings they would long ago have had to be pulled down to make room for accommodation adequate for greatly enlarged functions; if they had, on the other hand, been the possession of private families, they would have been sold because of their site values, but being as they are, the homes of communities having a long and illustrious history, it has been the pride of the Companies to preserve them to the gain of the whole community.

When the present war is ended there is little doubt that the Companies, who have ever recognised and practised patriotism, will confer on some of those who have honoured our country by services by land and sea a distinction which is always valued—the freedom of a City Company, which stands only second to the freedom of the great City of London, of which the Lord Mayor is the head and representative.

CORRESPONDENCE.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

The Cleanly and Godly Workman, by One Who is Neither.

SIR,—The writer of this article, we should think, would like everyone else to emulate his own standard, as he admits he is neither cleanly nor godly. Let's hope, however, he will not have a large following in respect to the former; since he has taken so much trouble to write the article, he must have some special reason in doing so. The facts apparent to us are that although he has used so much camouflage, his real object is to decry the use of the tip-up baths. It is not the first time this kind of running down has occurred, and whilst we ourselves are not seeking to make enemies, we apparently have some, in a business sense. Our record is a good one, as six years ago our goods had been supplied for artisan cottages to well over 100 towns and villages in England, Scotland and Wales, and many are being specified for after the war schemes by most eminent architects. Whilst we have gone along and taken no notice, we do not wish this to be regarded as weakness, but rather for time to prove that our system is right, and a first step in the right direction to get baths to be more generally fitted in working class dwellings. No one could inform the general public better than the Birmingham authorities as to the pioneer work we have done locally, and that work always on the bottom rung, and we are proud of it. Yes. The Darby Patent Tip-Up Bath has come to stay, and all genuine evidence is in favour of it (we enclose some herewith), and anyone else who cares to apply can have further copies of same.

We hope, in fairness to ourselves, you, Mr. Editor, will publish this letter, and that other trade papers who can see their way clear to do so will please copy same.—Yours, &c.,

THE PATENT TIP-UP BATH CO.

Birmingham: September 3.

ILLUSTRATIONS.

SKETCHES FOR CHAPEL: CHICHESTER TRAINING COLLEGE, BRIGHTON.

THESE are an admirable series of Mr. H. P. Burke Downing's working drawings which indicate much knowledge and refinement of expression.

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Monthly Review of Periodicals and Books.

WE propose to give a monthly section devoted to periodicals and books sent us for review which are likely to be of interest to the architect and the public. The mass of literature now published is so great that many of our readers may find it useful to have in a compact form some notice of what is published. In alluding to the contents of those publications which are frequently described as our "rivals," we shall try to do justice to whatever appears to us to be of general interest and value. The contents of no one publication can be always the best, and honour should be given where it is due. Rivalry between those who follow the same occupation has in the past been indulged in to an absurd extent, to the disregard of the common interests and aims which always exist. Our list will for many reasons not be a complete one at first, but after a few months we shall trust with the assistance of publishers—who will we hope place blocks at our disposal when possible—to neglect nothing of value to our readers. Owing to the difficulties caused by the war we shall not at present review foreign periodicals.

Our Architectural Papers.

"The Architect and Builder's Journal."

"The Architect and Builder's Journal" continue their series of monuments, among which are included the Garibaldi monument at Rome and the commemorative column erected at West Point from a design of Messrs. McKim, Meade & White. Other of their series, which contain much interesting work, are London Façades, Furniture, and Monumental Architecture. Considering the difficulties of the time "The Architect and Builder's Journal" have maintained a high level of production. Among interesting text matter are a series of articles entitled "Towards a Transformed London," by G. Ll. Morris and H. Parnacott, and the War Buildings Section, which contains some useful matter.

"The Architectural Review."

The August number of "The Architectural Review" contains a well written article on the churches of Brighton and Hove, by H. S. Goodhart-Rendel; one on "French Renaissance Annals," which is a review of Arthur Tilley's book; the "Development of Birmingham," which treats of Mr. Haywood's recent book on the subject; a short account of Macgregor Chalmers's work at Paisley Abbey; and other shorter articles, including one by Annabel Dott on "The Woman Architect and her Work," illustrated by some photographs of the Stone House, Goathland, "the work of a woman who was not an architect, but who had some knowledge of building and a very clear idea of what she wanted." No plan is given, but the photographs establish the fact that the designer was not an architect.

"The Architectural Journal."

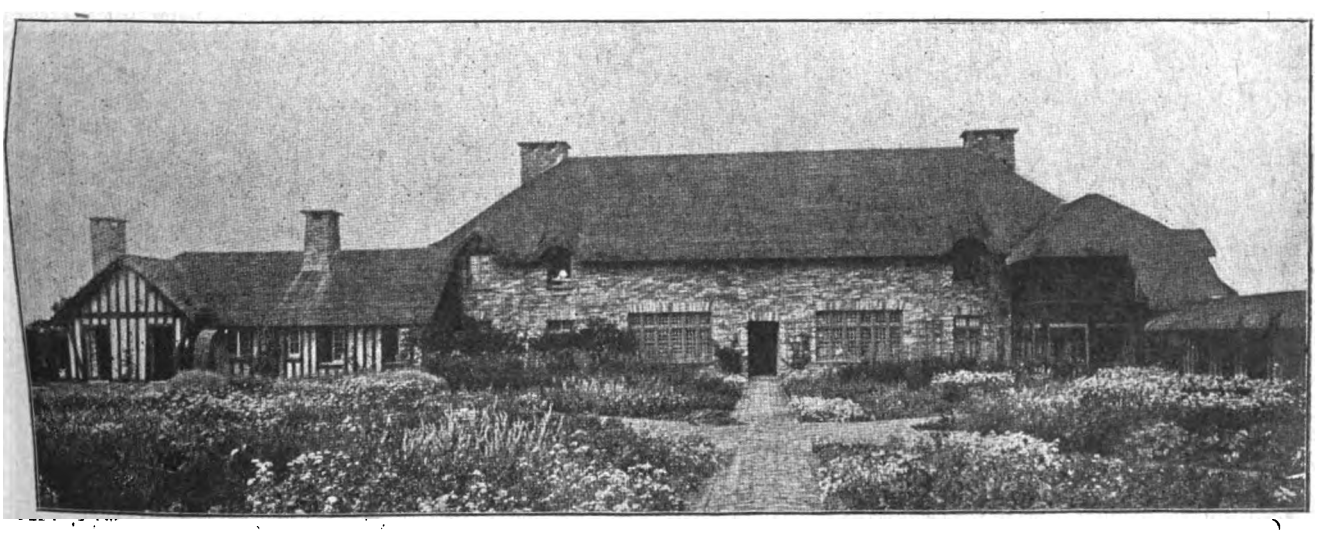
The August number of the R.I.B.A. Journal contains a well written sketch of Augustus Welby Pugin by Harry Sirr, which gives a vivid picture of one of the greatest protagonists of the Gothic Revival, a man of inexhaustible energy, who, when urged to employ a clerk, answered, "A clerk, my dear sir, a clerk? I never employ one. I should kill him in a week." When employed in detailing Barry's Houses of Parliament Barry urged him to take in a reef or two, a metaphor which was likely to appeal to one who had been a sailor in his earlier days. The achievements of Pugin were those of a giant, and considering the circumstances in which he lived his achievements were truly remarkable. The number contains little besides this, and a short article by A. E. Richardson on Professor Cockerell's design for an Ionic volute, and the customary correspondence and notices.

"The Builder."

"The Builder" has been partially recast in form, more notes being now given, and a greater attempt being made to cover more ground in each issue. Changes are apparent in the policy expressed in leading articles, but it is as yet too early to criticise their apparent trend. Australia House was well illustrated, and some excellent results produced by the crayon photo process adopted by T. Raffles Davison. Considerable space has been given up to the illustration of Ernest Newton's work, which, though we know most of the subjects illustrated, is quite justified by their admirable character. Among the series of City Company Halls, Coachmakers' Hall is dealt with.

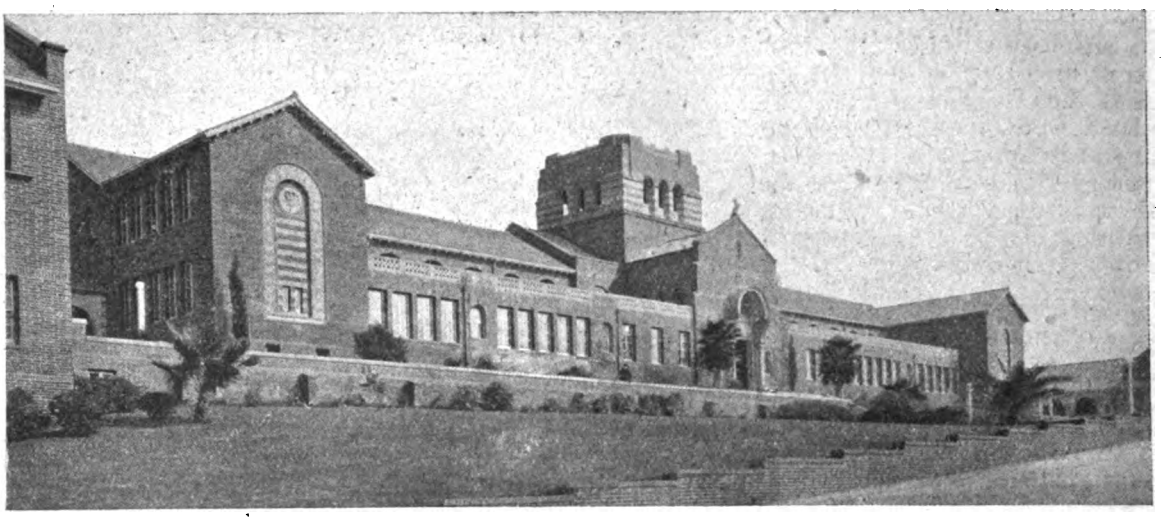
"The Building News."

"The Building News" is giving an interesting series of scale drawings of architects' works, and among those which have appeared in August are a house at Balfour in the Transvaal, by Herbert Baker, planned round a square atrium, and Craythorne, Yorkshire, and Putteridge Bury, Luton, Bedfordshire, both by Sir Ernest George, R.A., and A. B. Yeates. Other interesting illustrations include one of the King's Stall in the Chapel of the Thistle, and some good reproductions of All Saints, Basingstoke. Among other articles are one on Estimating Methods for the Contractor, and Army Contracts in America, which draws attention to the better management of the American Government as compared with our own; while a third deals with "The Future Responsibility of Architects."



A COUNTRY HOUSE (showing affinity to a Scene Painter's Treatment).—ALLBRO & LINDEBERG, Architects.
(From "The Architectural Forum.")

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STA. MONICA HIGH SCHOOL.—ALLISON & ALLISON, Architects.
(From "The Western Architect.")

American Architectural Papers.

"The American Architect."

The work illustrated in "The American Architect" of July includes nothing of outstanding merit. Like the work of our Gallic neighbours, American building is freer from vulgarity than much we see here, but like a great deal of modern French work it is often exceedingly uninteresting. American Gothic becomes painful unless executed by a few men who, like Cram, Goodhue & Ferguson, have studied mediæval work with understanding, and the half-timber designs of American architects may be described in popular phraseology as being "the limit." Such a building as the Metropolitan Bank, Minneapolis (July 10) is frankly an eyesore, despite the skill which its construction and planning may show. We are afraid that with the death of Charles McKim American architecture has arrived at a period of retrogression. The pages of "The American Architect" are as usual filled with much good matter, which includes an interesting article on the construction of the Cathedral of St. Louis, one of the greatest of the domical churches in the world.

"The Architectural Forum."

"The Architectural Forum," whose earlier and simpler title of "The Brickbuilder" seemed to us a better one, is often more interesting than the other American publications, and its July number is a case in point. The first article is one by C. Matlock Price on "The Importance of Colour and Texture in Building Materials," and is illustrated by some interesting views of buildings, two of which we reproduce, the first a doorway which shows the influence of the better school of German design, in which a certain effect of quaintness is obtained, while the second, a country house, shows that our cousins over the water frequently obtain, much as a painter might do, a certain picturesque effect while entirely ignoring the traditional treatment of detail. One may characterise this in a sentence as resembling a painter's idea of architecture such as we often see in our stage scenery. Interesting articles are given on American war buildings under the titles of the Pelham Bay Naval Reserve Training Station and Army Libraries and Liberty Theatres, the last illustrated with full plans and photographs of cleverly designed frame buildings. A third article is on the "Development of American Architecture," and there are editorial comments on the national organisation of the building industry which was completed at a recent conference held in Atlantic City. It is stated that "the achievements of ante-war days will be surpassed, and to do this the many related arteries of the industry must be maintained and developed. Organisation and co-ordination of effort is the only way in which this can be done, and the new National Federation of the Building Industries holds the promise of effecting this desirable result." It will be noted that the effect of the war in this respect both here and in America is to teach the same lesson.



COUNTRY HOUSE FOR FRANCIS L. HINE.—WALKER & GILLETTE, Architects.
(From "The Architectural Record")

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"The Architectural Record."

"The Architectural Record" for July contains, as usual, a large mass of matter. One of the best things in it is an illustrated article on the country house of Francis L. Hine, a good example of the old Colonial type which is so peculiarly American. Both the external and internal treatment are good. Other articles deal with semi-military buildings in National Army Cantonments, English Decoration by Albert E. Bullock, Industrial Housing Developments, Architecture and Democracy, and other matters.

"The Western Architect."

"The Western Architect" for June contains some very good illustrations of school buildings, including the Sta. Monica High School and Glendora Grammar School. The former is an admirable piece of composition. The Spanish Congregational School at Riverside, of which a small view is given, is a very clever essay based on Spanish Renaissance precedent.

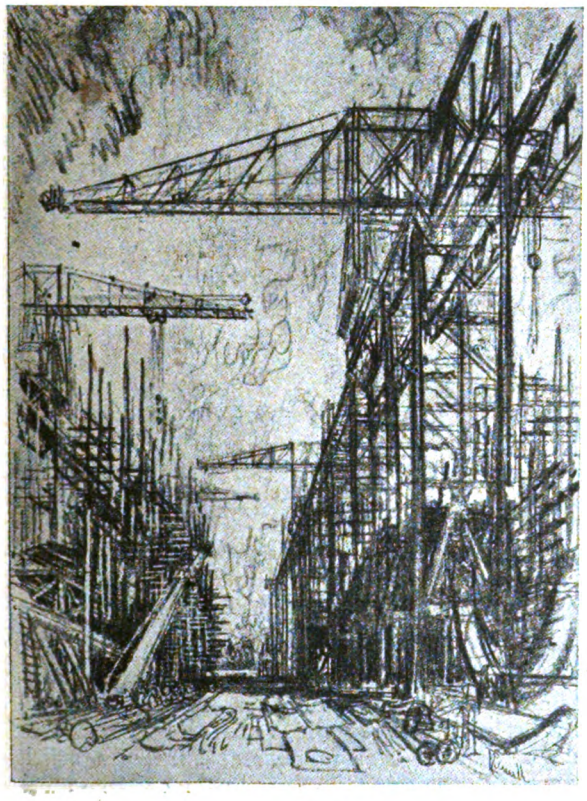
Art Publications.

"Colour."

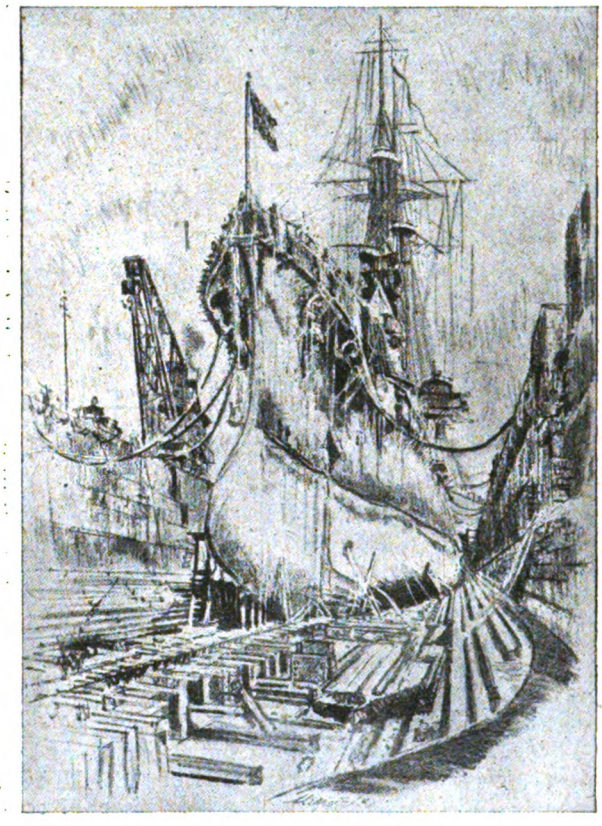
The August number of "Colour" is, as usual, very attractively produced, and its wide popularity proves that it meets a want in periodical art production. The September number will be devoted to the illustration of the pictures commissioned by the Canadian War Records Office, on which more than fifty British and Canadian artists have been employed, and which will form a record of everything done by Canadians in the present war. Alfred Woolmark and his place in Art is the subject of an article by "Tis," who cleverly supports the "new revelation." Woolmark's early portraits were winning him reputation when he revolutionised his methods to follow his propensity for pure absolute colour, which, as the writer says, forms strong interlocking, counterbalancing definite shapes. Eden Phillpotts gives "Leaves from an Artist's Notebook," describing the beauty of the country, which is illustrated with a number of examples of different painters' works. "Left Waiting," by Montgomery Belgion, "Verden's Best Friend," by R. Murray Gilchrist, and a short article by Bart Kennedy, interspersed with examples of the work of some of our more modern disciples of colour, and including admirable examples of Paul Henry's and P. G. Glennie's work complete an interesting exposition of the art of colour.

"The Connoisseur."

"The Connoisseur" for August forms a very interesting number, containing articles by C. H. Collins Baker on a "Conversation Piece" by Joseph Highmore which is in Lord Plymouth's collection, and has been erroneously attributed to Hogarth and to Thomas Richardson. The article is well illustrated by other examples of Highmore's work, including a delightful portrait of Mrs. Hawley. W. Ruskin Butterfield writes on "Welsh Love Spoons." The wooden spoon was formerly associated with courting, and in the "love spoon" became elaborated, so that their original practical purpose was entirely lost sight of. The examples illustrated, some of which are very quaint, range from the second half of the eighteenth to the early years of the nineteenth century, and most of them are the property of Mr. H. H. Edmondson, of Preston. An article by Herbert A. Bone on "Arras Tapestry—Past and Future" is headed by an appeal by Sir George Frampton, who wishes, and we think rightly, to advocate the use of tapestry for purposes of war memorials. C. Hemming deals with Bristol Delft, illustrated by some good examples.



XII.—BUILDING DESTROYERS.
(From Joseph Pennell's "Pictures of War Work in America.")

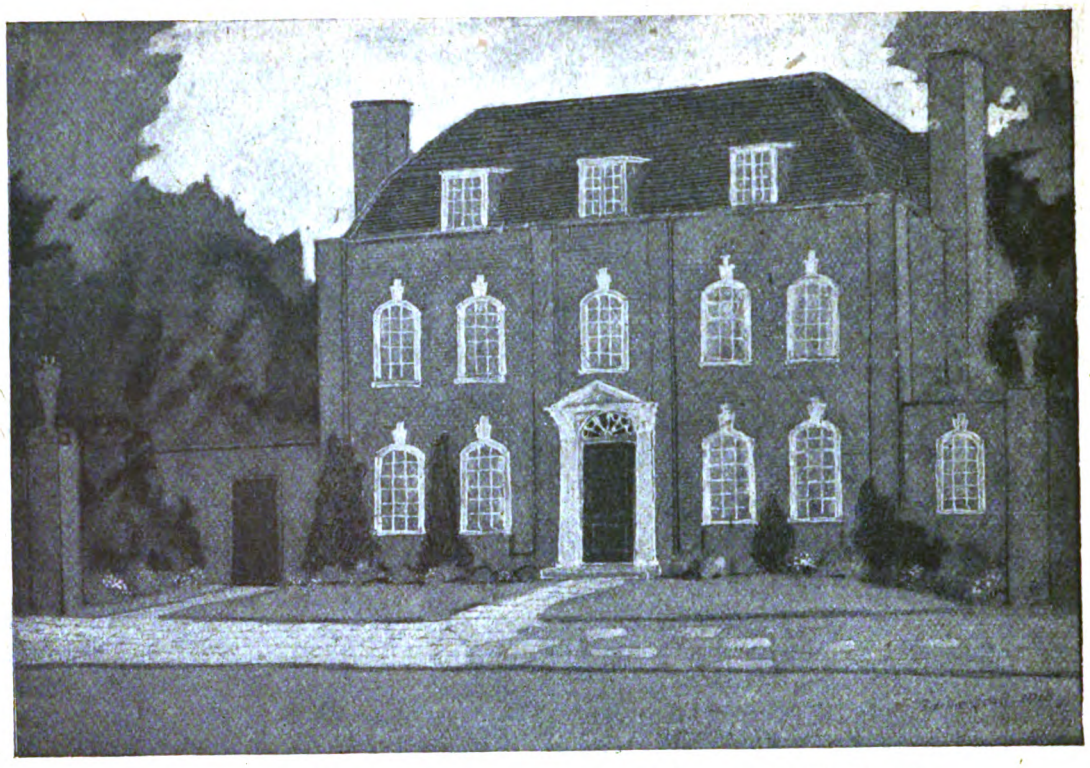


XII.—IN THE DRY DOCK.
(From Joseph Pennell's "Pictures of War Work in America.")

"The Studio."

"The Studio," like "Country Life," has always filled the part of a bridge between the amateur and the professional in Art, while time has modified its strong tendencies in the direction of the Arts and Crafts School of thought. The August number contains an article on the paintings of the late Niels M. Lund, a Dane by birth, whose life has been associated with Newcastle-upon-Tyne, which is illustrated by good reproductions of his renderings of landscape. An article on Lee Hankey's work is illustrated by some reproductions of his dry-point work dealing with French peasant scenes and landscapes, which possess an admirable quality of quiet dignity and simplicity. "Studio Talk" contains a reproduction of a fine aquatint of the Slaggan Pass, Scotland, by Stella Langdale.

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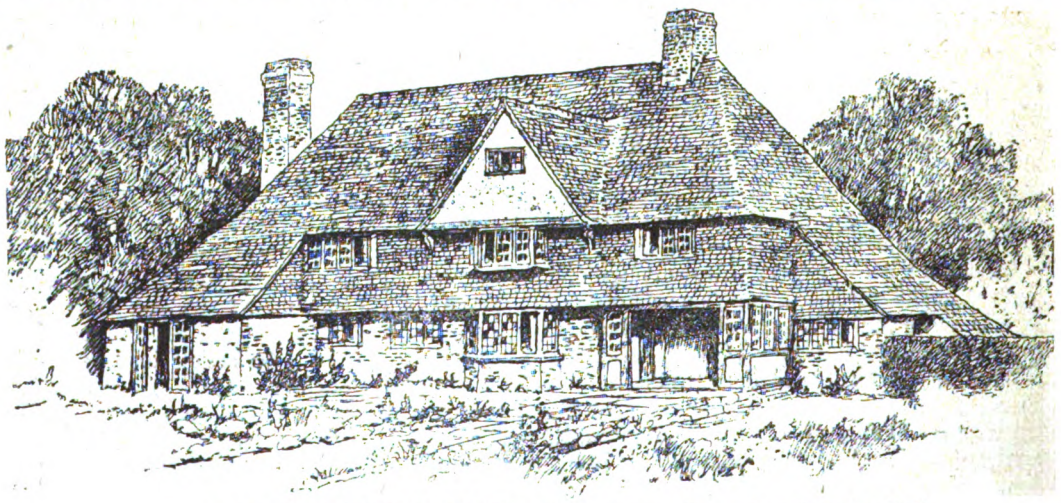


A SMALL SUBURBAN FOUSE.—M. H. BAILLIE SCOTT, from "The Studio."

"*The Studio Year-Book of Decorative Art*" contains well written descriptions of three of Mr. H. Baillie Scott's houses, which are, as always, interesting, and repay study, the last of them being an interesting essay in a Georgian manner designed for a suburban plot at a cost of £800 (pre-war prices). Mr. Baillie Scott's defence of this essay is characteristic. "It has a well behaved and well drilled aspect, and being somewhat artificial and conventional, finds itself more at home in town or suburb than in the country. It does not suffer so much from mechanical workmanship as the older manner of building, and since it imposes some restraint on natural gesture it may be compared to a straight waistcoat, which may be wisely worn by those who have lost the power of natural and graceful movement." We should be inclined to give less stinted praise to an admirable design. The remainder of the volume is occupied with good illustrations of the domestic work of W. H. Bidlake, John Bilson, Buckland & Haywood-Farmer, James B. Dunn, A. N. Prentice, and others, who are all doing work which maintains the reputation of English domestic architecture. The section on interior decoration includes some fine examples of George Sheringham's designs for friezes and for a mural panel painted on silk which are highly decorative in their character. The design for a mural panel, by R. Morton Nance, is very good and spirited, and that shown in colour for an intarsia panel of "St. Hubert," by A. J. Rowley, forms an admirable piece of colour decoration. We do not much care for the examples of furniture shown, which are too obviously the products of the Arts and Crafts movement; but two colour designs for cretonnes and printed cotton designed by Constance Irving and Charles Mackintosh are admirable in effect.

"*The Burlington Magazine.*"

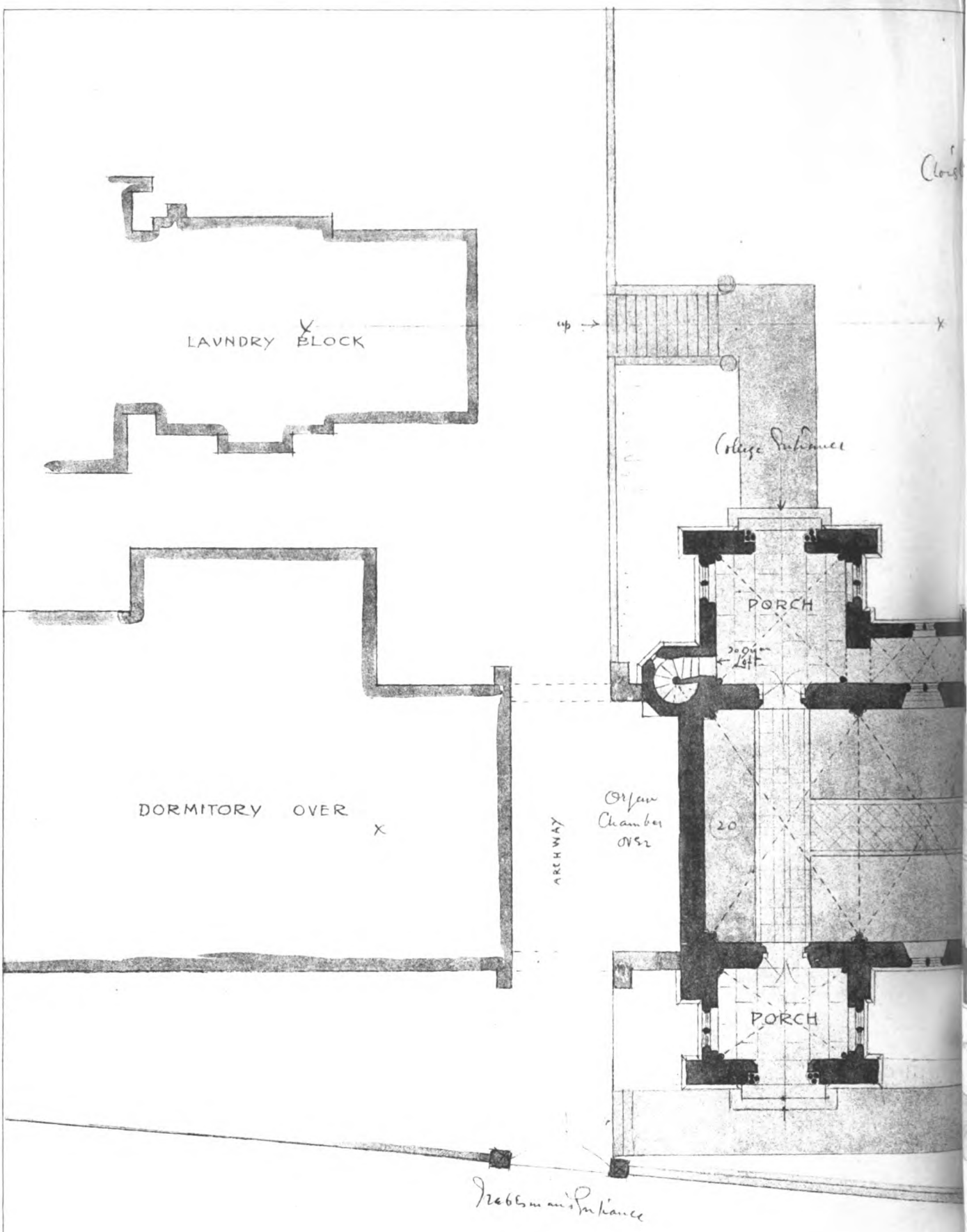
The August number contains an article on Mr. E. L. Franklin's petit point Panel, by C. E. Cecil Tattersall, a fine example of the secular embroidery which replaced the earlier work of a religious character. The writer says that "Whatever may have been the origin of *petit point*, there can be no doubt that it was found to be as invaluable a method of beautifying the walls and furniture of dwellings as blackwork was in enriching the garments of their occupiers." The life of St. John the Baptist, Giovanni di Paolo's masterpiece, is illustrated and described by Giacomo de Nicola. This great work was secured by Mr. Martin A. Ryerson, of Chicago, when the collection of which it formed a part was dispersed in 1913. Mr. G. F. Hill writes on recent acquisitions for public collection in the form of some fine medals of the sixteenth century, including those of Bernhard Walter, who belonged to a well-known Augsburg merchant family. The designer's name is unknown, but Mr. Hill has drawn up a list of the works which are evidently those of the same medallist. The number also includes articles by Aymer Vallance on the Exhibition of Glass Painting



A SMALL COUNTRY HOUSE.—M. H. BAILLIE SCOTT, from "The Studio."

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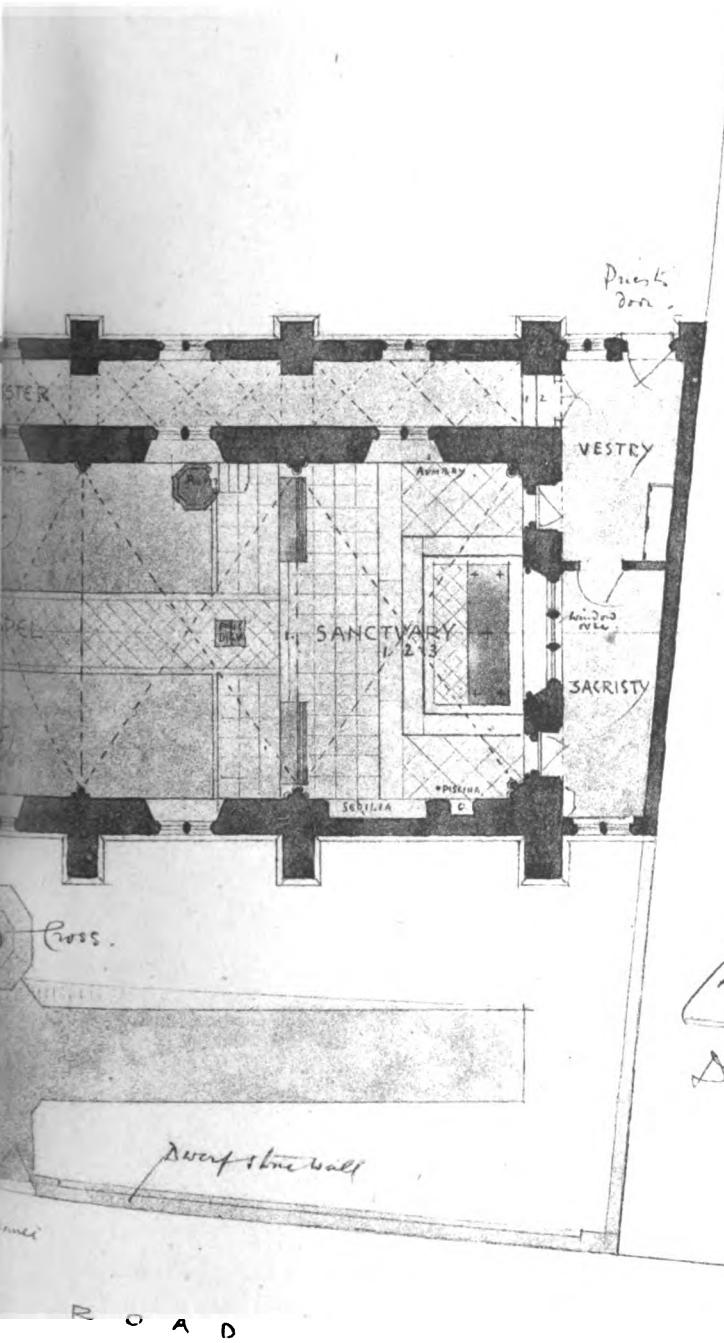
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The Plan.

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1918



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Priest's door

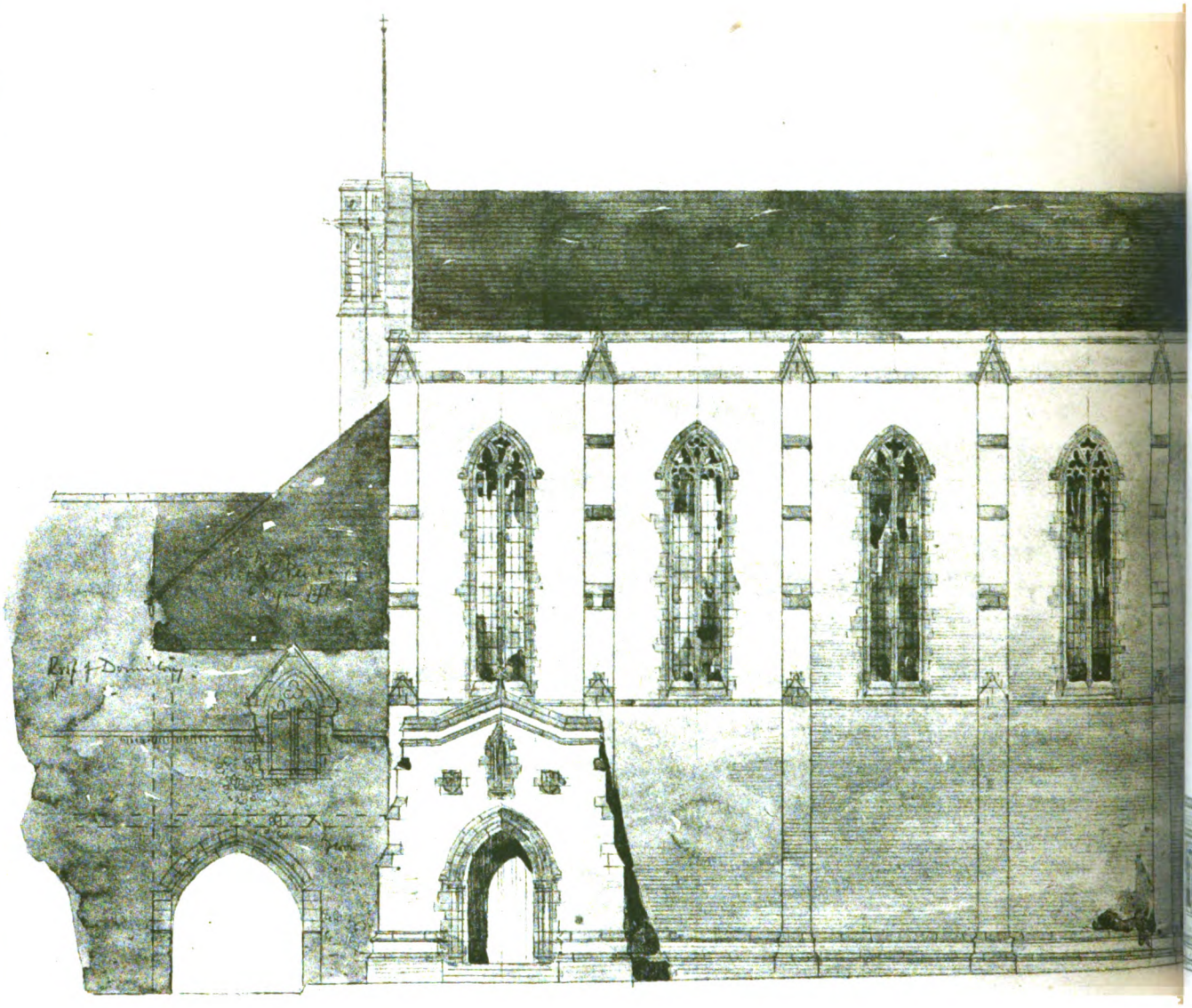
Ground Plan of
FRIARY
Dioc: Archt
12 Little College St.
Westminster Abbey
S.W. 1.

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The Elevation to Ditchling Road.

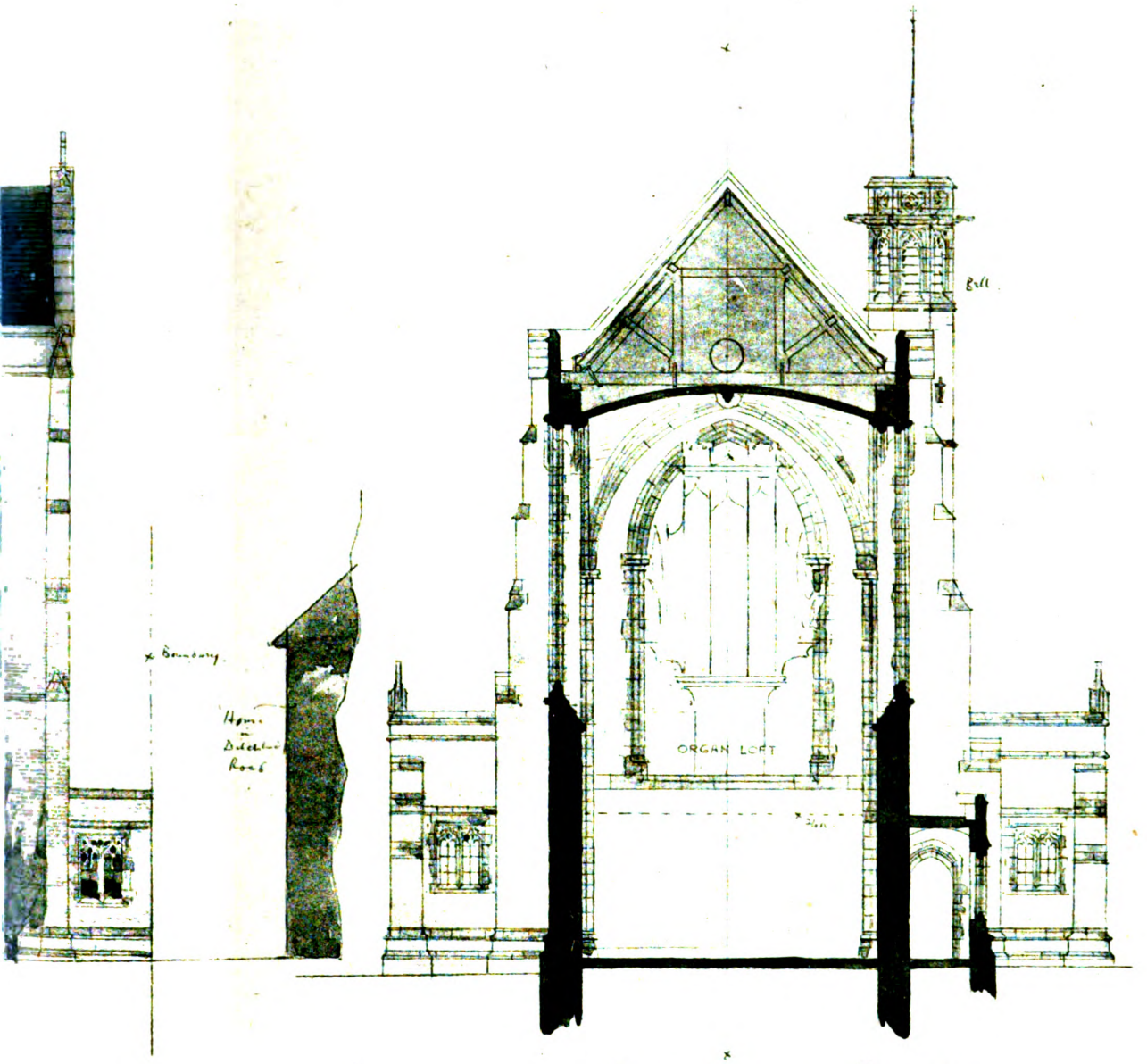
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SKETCH FOR CHAPEL: CHICHESTER

H. P. BURKE DOWNING,

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t 6th 1918



Section looking "West"

Sir Aston Webb & Son
Archts

Diocesan Architect

F.R.I.B.A.

12 Little College Street
Westminster Abbey S.W.1.

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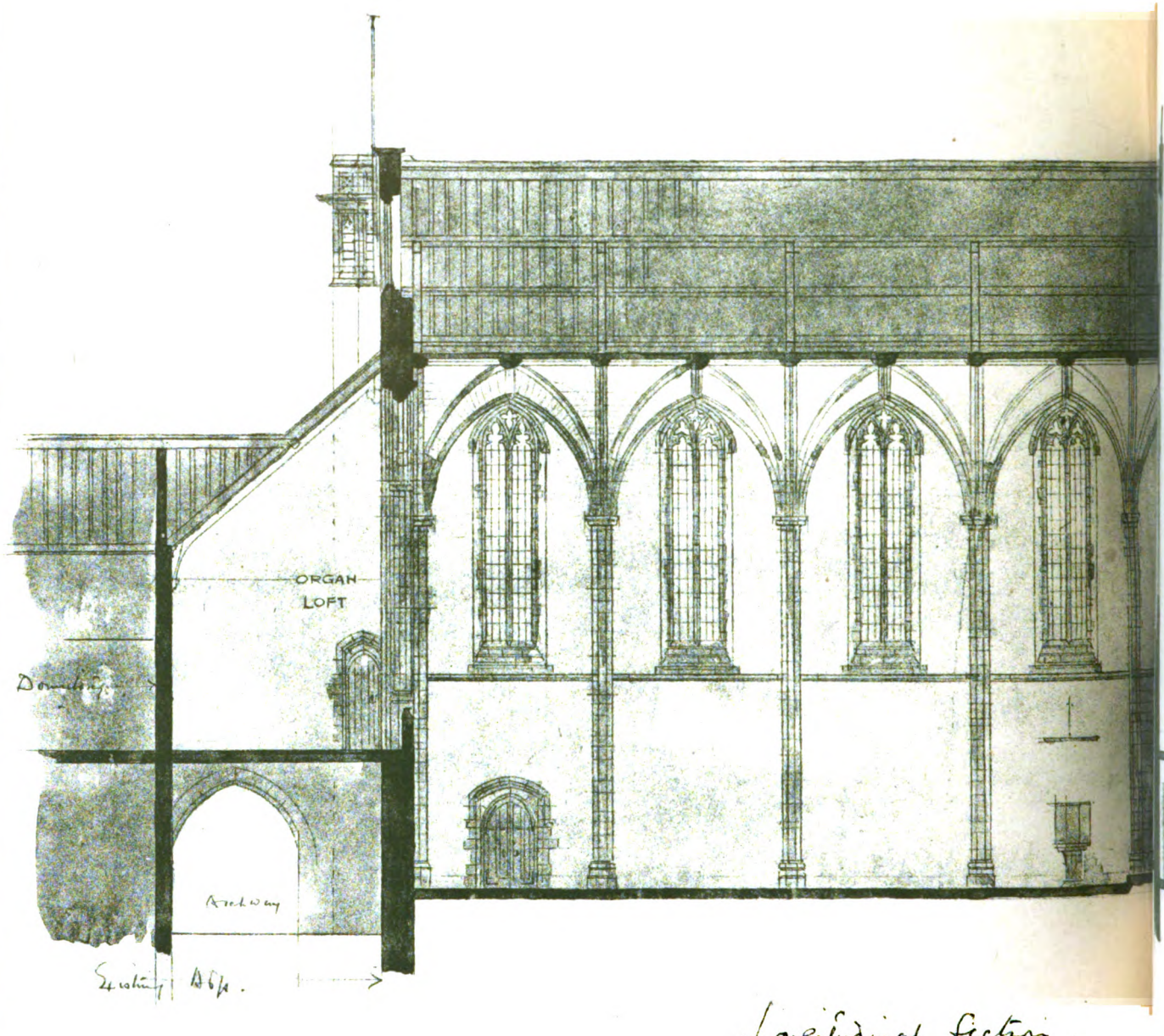
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Longitudinal Section

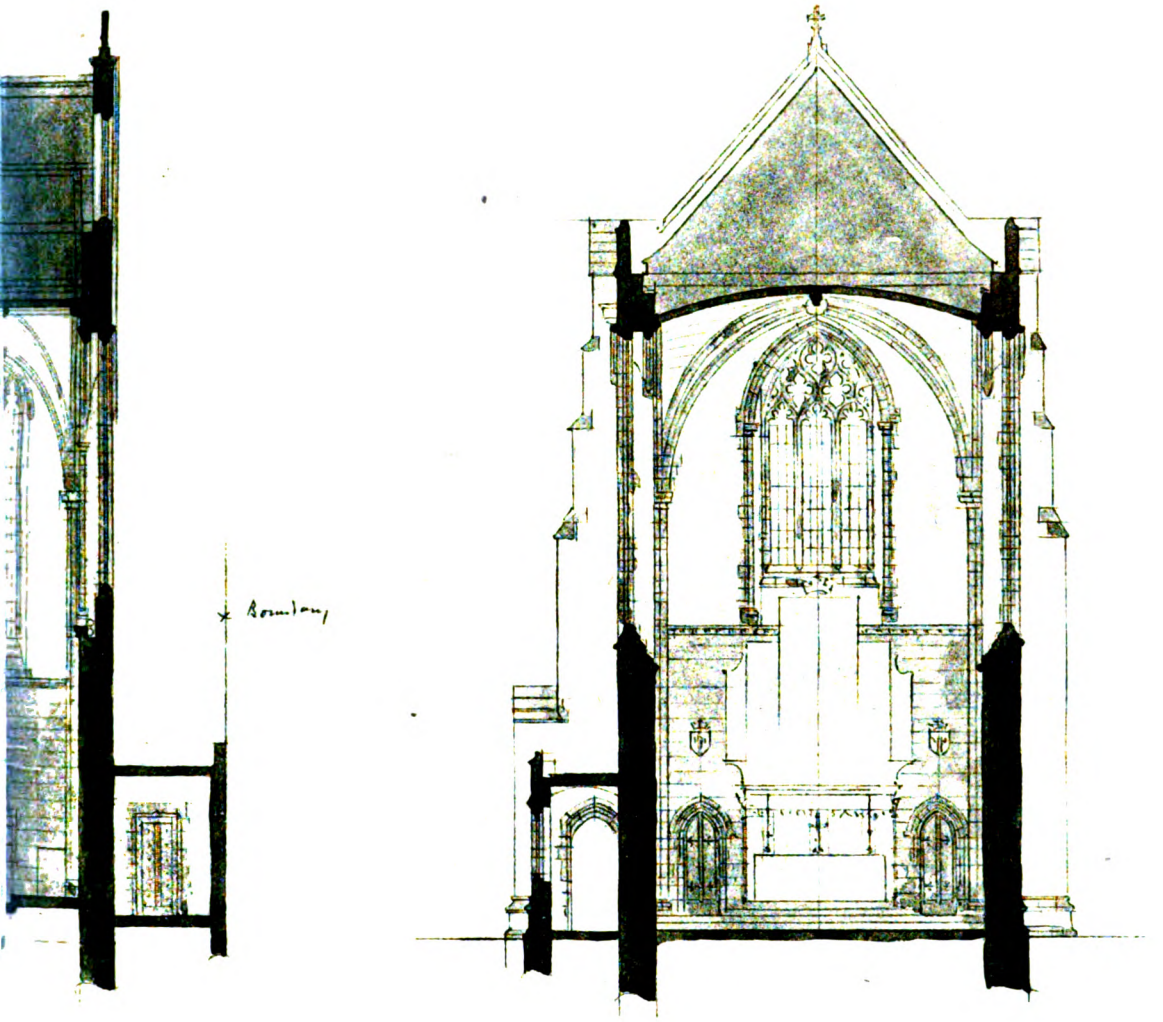
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SKETCH FOR CHAPEL: CHICHESTER

H. P. BURKE DOWNING

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pt: 6th 1918.



The East End - Section.

(to Basil Dominy
F.R.I.B.A.
Dioc. Arch.t
12 Little College St -
Westminster Abbey
S.W.1.

90 100 110 120 130 140 157 feet

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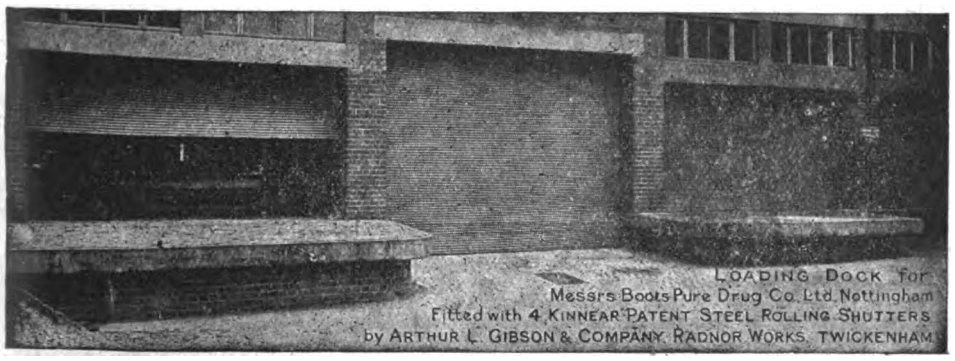
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shown at the Fine Art Society's Galleries last May, one on a Bronze by Godefroid de Claire representing the Sea, by H. B. Mitchell, a note on two Portraits by Ingres, and the usual review features.

"Country Life."

"Country Life" has probably done more than any other publication to awaken interest in our traditional architecture and to demonstrate to the public that we have architects in our midst who can carry on those traditions. In this manner it has performed a most valuable service to the whole profession, while the character and quality of its illustrations mark a high standard of excellence. The series of country houses given in the past month comprises Shavington (August 3 and 10), a dignified and simple seventeenth-century composition with a long and almost unbroken east front, a west front with projecting side wings, and a fine staircase. This was the house which Norman Shaw, who carried out alterations to it, described as being somewhat dull, but we agree with Mr. Avray Tipping that it possesses too marked a quality of dignity to be uninteresting. The issue of August 17 contains some good views of the Gretna Industrial Settlement, of which the design is unusually happy, being free from pedantic affectation or spurious picturesqueness. In August 24 Brabourne, Kent, is illustrated, a building dating from Tudor times, but of which most of the existing work belongs to the eighteenth century, described as the superimposition of a symmetrical design on foundations of a Tudor period. In the same issue Mr. Spicer Leigh Hughes, M.P., writes an article on the painted panel showing the Kaiser and Kaiserin in the attire of Crusaders, which he left behind in the Hospice of the Mount of Olives in one of his well-known progresses through other lands.

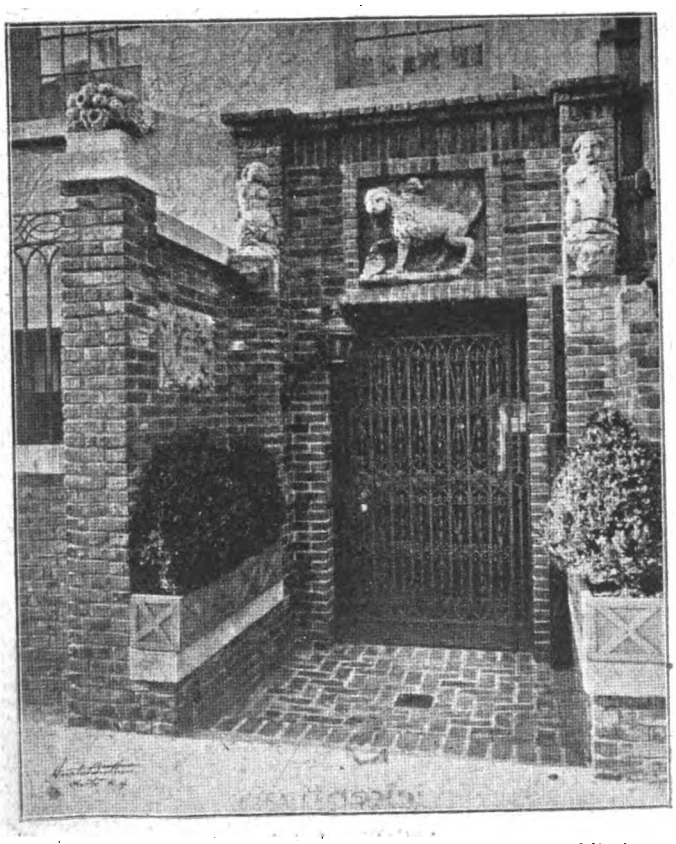
Books.

"Pictures of War Work in America." By Joseph Pennell. (J. B. Lippincott & Co.)

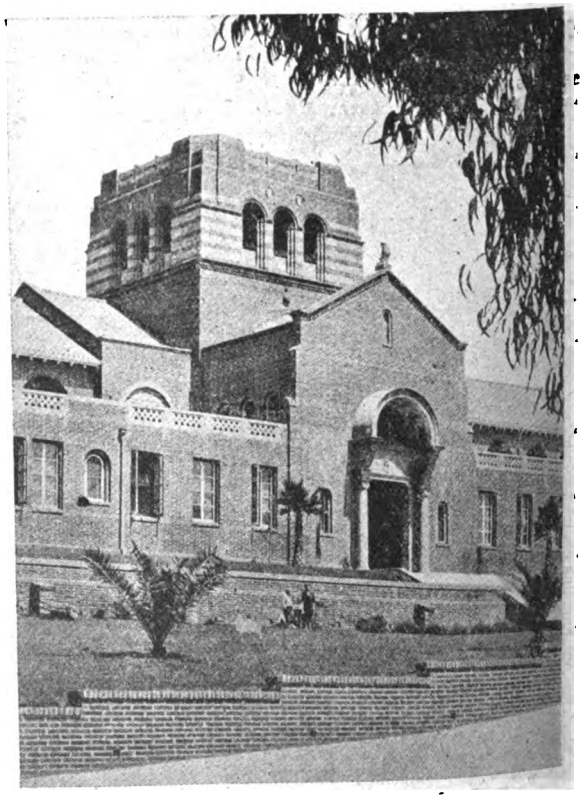
The war, which Mr. Pennell believes could have been "easily avoided," for he is included in the small minority who agree with Mr. John Burns, has given him a great opportunity for his art. Though he is filled with loathing of war he sees in its preparations another chapter of the Wonders of Work, and in the present volume, from which we reproduce two drawings, he shows us what he has recorded for all time. The book is well illustrated with 36 lithographs; those we reproduce are among the most characteristic, and the view in Dry Dock shows Mr. Pennell's mastery of the art of line and tone.

"The New Moon." By Oliver Onions. (London: Hodder & Stoughton.)

It sometimes happens that an author, while indifferently achieving his main object, does excellent work in other directions, and this applies to the "New Moon," which, as a study of the difficulties and dangers of reconstruction, is rather wearisome. We instinctively think how admirably Wells would have dealt with a similar subject. The book suffers from the bewildering multiplicity of characters and incidents introduced, nor do we feel that any distinctive note is struck throughout. On the other hand, the love passages between Dick Helme and Betty Lydgard and the account of their honeymoon in a caravan is idyllic. So, too, is the description of that impossible fraud Kimber, who is always looking out for opportunities to obtain soft jobs at the public expense, and all will recognise the type. Another fraud—the millionaire Gillingham Wade—who seeks notoriety by developing "artistic" villages, is admirably sketched, the book being full of good things and descriptions which show the author's knowledge of men and of life. But our feeling is that it really needs rewriting: as it stands it is a poor contribution—if any contribution—to a complicated subject which would suit Wells, but no one else we can think of. The author's métier is the study of character and the construction of drama, as has been shown by several admirable books. When reconstruction has taken place Oliver Onions will doubtless be able to bring fancy and imagination to bear on facts, but as the prophet of a future state still behind the curtain of the future he fails, and we think fails badly.



TEXTURE IN BUILDING.—FREDERICK STEMER, Architect.
(From "The Architectural Forum")



STA. MONICA HIGH SCHOOL.
(From "The Western Architect.")

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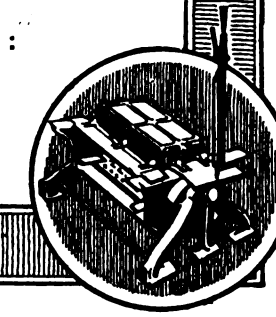
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"Studies of the Human Figure." By C. M. Ellwood and F. R. Yerbury. (B. T. Batsford, Ltd., 94 High Holborn. 15*s.* net.)

This is a book which will certainly become a standard work for all who are actively engaged in occupations connected with drawing and design. A book may be small because its writer has little to say, or small because he has acquired the art of expressing knowledge and imparting information concisely. And the same holds with regard to illustrations, for the tendency to increase their number which we often notice is in many cases due to a lack of that critical faculty which is fundamental to the production of first-class work. In the present work there is not a page too much and not an illustration which would be better omitted, and although the author modestly states that the book only teaches the rudiments of figure drawing, we believe that those who have mastered its contents can dispense with anything else besides actual work and practice from life.

Mr. Ellwood writes from the standpoint of one who has had experience and can foresee the student's difficulties, and the manner in which they can best be conquered by successive stages of study. Following on this is a concisely written description of the anatomical facts which the student of figure drawing must master, and finally a carefully prepared series of over eighty photographic studies of the human figure which have been selected from more than 200 made by Mr. Yerbury from models carefully posed by the authors.



We have rarely seen more magnificent specimens of photography, as they are clear, soft in execution, and carefully arranged, so that while values of light and shade are well expressed they do not obliterate details of form. The figures are also kept to a uniform scale, which increases their usefulness. It is not suggested that the present volume should form a substitute for drawing from the life, but that it should be a useful supplement to it, for attendances at a life class must necessarily be limited in number, and a great deal of figure drawing must be done away from the human model, and in such cases the memoria technica may well be invaluable. The subjects are arranged to cover as nearly as possible the various poses which artists are most likely to need in their work; thus XXXIX and XL, model No. 3, are described as being "two decorative kneeling poses complimentary to each other, and useful for sculpture or church decoration work." These, we may add, are two of the most beautiful among the illustrations given. The subject given in the frontispiece, of which we give a small reproduction, illustrates "an exquisite contemplative pose showing the body entirely at rest and greatly foreshortened in comparison with an erect position."

A very interesting series of drawings and paintings from the figure is included in the volume, including one by Puvis de Chavannes, another by Walcot, and a series by students from various schools of art.

There is hardly anyone interested in the various arts of delineation who would not find this book useful, for it certainly fills a want, and is admirable both in conception and execution.

"Town Planning in Madras. By H. V. Lanchester, F.R.I.B.A., M.T.P.I., &c. (Constable & Co., Ltd. 12*s.* 6*d.*)

This interesting book is based on a series of lectures delivered in Madras, and deals with the problems of that city. The author has also given thought to the application of town planning to other important towns in the Presidency. The book is prefaced by a brief introduction by the Governor, Baron Pentland of Lyth, in which the difficulties of adapting an old civilisation to complex modern conditions are emphasised. We may say at the outset that British administration, which has given a peace to India which it had never known since the early dawn of its history, has at the same time accentuated many economical problems. Formerly wars and periodic famines acted as safety valves and reduced the pressure of a population which has always lived on the smallest margin possible.

The first chapters of the book deal with the general subject of town planning, to which we do not propose to refer, and in succeeding chapters the author compares the Indian city with those of mediæval Europe, and explains the traditional method of laying down the main lines of their plans, which were more uniform in their arrangement than those of Europe, which were often varied to suit contours, while most of the Indian cities are situated in plains.

Many abandoned cities are found in India, and probably because the location of towns was frequently settled without a very definite economic reason and depended on the caprice of a ruler, the majority of the native towns are more slightly built than their counterparts in Europe. The traditional grouping of the dwellings belonging to men of different trades, generally also representing different castes, are alluded to. Madras has not been spoiled by the adoption of high buildings, which add to the difficulties of sanitation in Bombay and Calcutta, and Mr. Lanchester points out that many Indian cities are practically garden cities as they stand. The requirements of the Indian house are touched upon and illustrated by plans. Though the Madras Town Planning Act has not yet become law, Indian authorities have been putting town-planning principles into practice in an informal manner. Indeed, the author states that except in the absence of surveys, India is better prepared for the application of town-planning principles than is England itself. The importance from both æsthetic and hygienic reasons of retaining the bathing tanks, which are so marked a feature in Indian cities, is referred to.

The main part of the volume is devoted to the problem of Madras itself, prefaced by a historical sketch. It is described as being a city possessing exceptional possibilities rather than as being a fine city, but, although many opportunities have been lost in the past, the adoption of a remedial problem is feasible.

The recommendations made include the more definite allocation of roads for swift and slow traffic respectively, the provision of over-bridges between the north and south sections of the city, the increase of good frontages f important business premises on Front-line Beach by opening up squares, the better concentration of public buildings which at present are scattered. It is suggested that these should be placed at Fort St. George, the educational centre being formed in the Chepauk area. Open spaces are numerous, so much so that some of them could be utilised as the location for important buildings. The book is well illustrated, especially with a series of plans of Madras arranged to show contours, religions, trades, the distribution of population, mortality, ground values, suggested railways and waterways, an improvement scheme, tramway scheme, improvement scheme for the central area, the outer-park system, and the division of the city between various ownerships. It is a most useful and complete essay, which will prove of much practical value.

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THE ARCHITECT AND CONTRACT REPORTER

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The Ministry of Reconstruction, the Blank Cheque and Utopia.

We have before us two pamphlets issued by the Ministry of Reconstruction, the first composed from speeches made by Dr. Addison and entitled "The Aims of Reconstruction"; the title of the second is "Housing in England and Wales," and apparently a whole series is to follow laying down the lines on which all post-war problems are to be met according to the autocrats of to-day. Our present rulers frequently forget that they are in office to carry the war to a successful conclusion, and for no other purpose, except to secure the ends we seek by measures which will safeguard the interests of our people and their commerce. Dr. Addison states that when the Government were asked in 1915 to prepare for the problems which would arise after the war—we may say we have no recollection of such a mandate being delivered—the views of those in authority were that what was required was some machinery which would allow the country to slip back to pre-war conditions as quickly as possible, but that since that time they had come to the conclusion that it would be possible to greatly better former conditions, and so produce an Utopia—the last word is our own.

We humbly suggest that what is needed from Government is the maintenance at the smallest cost to the community of the safeguards behind which the private enterprise of the country can develop itself. For many years previous to the outbreak of war the Governments of Europe had every reason to know what the real aims and ambitions of Germany were, and had they fulfilled the first duty they owed to their peoples they would have made such preparations as would have secured peace, but because they acted as politicians whose chief preoccupations were of an opportunist character, Europe has been subjected to the horrors of the greatest war in history.

The next duty to the successful prosecution of the war is surely the obtaining of satisfactory terms of peace, a subject about which our Government is curiously reticent. We submit that these problems and not the promotion of schemes for Reconstruction are what our people are anxious our Government should adequately solve. Our shipping, mines, railways and factories have been taken over for the period of the war. Dr. Addison says naively enough that the future of our railways is a difficult question. We submit that though this may be the case it is a question for the companies which own them, and not for the Government which is only using them for the period of the war. In our view the duty of the Government is to hand back all private property and to terminate all controls within the shortest possible time after the conclusion of peace, but apparently they are not disposed to contemplate the termination of their present powers with equanimity. We are constantly reading of new proposals—the establishment of a Ministry of Health and the conversion of doctors into a branch of the Civil Service, the purchase of the Liquor Trade and the institution of a huge measure of Housing, coupled with the maintenance of a system of control which will eliminate private enterprise.

In its management of Labour disputes Government arbitrators have adopted the easy solution of conceding in effect all Labour has asked for, and we can quite understand why Labour is partial to a régime under which it has come off so well. The country, knowing that a stoppage of work might spell disaster in the field, has accepted the results philosophically, but what may be permissible for the period of the war could not become permanent. When the war ends Labour will have to give its fair equivalent, or, failing adjustments, works will be shut down. We believe and hope that the newly instituted Trade Councils will lead to better relations between employers and employed, and that wages will be kept at their present level or increased, but if this is to be, the limitation of production by trades union regulations must cease. In any case this, which is the most critical industrial question of the day, can be settled only by direct negotiation between masters and men. If the men are wise we believe they have it in their power to obtain, not a Utopian result, but better conditions than ever before; if they do not no Government scheme can help them.

It is not argument to quote the fervid utterances of politicians on the miseries of overcrowding when all who think know that the great bulk of the workers of the country could pay a fair market price for the accommodation they need. In the decadent phase of Roman power its citizens were presented with doles of corn, and the provision of housing accommodation at uneconomic rents for people who can provide themselves would mark the decadence of our nation.

The solution of the problem of rural development depends not on the provision of houses by the State, but on the simple issue which the farming industry have raised for years—the imposition of a sufficient duty on imported wheat to make it profitable to grow it here, and the development of a great beet-growing industry depends on the temporary remission of excise duty. All that our dyers and many other manufacturing industries need is some protection, but if we shrink from a remedy that is obvious, we cannot expect in the long run to succeed in staving off ruin by any system of State aid.

Our main contention is that the bulk of the political propaganda which issues from the Ministry of Reconstruction and from other departments is not open and candid. On the face of it these documents read like the grave proposals of responsible statesmen; in reality they are the utterances of politicians who will give no clear answer on vital points on which everything else hinges. Among these vital points are, first, whether the Government intends this country or Germany to pay the cost of the war; second, whether we are going to protect our industries including that of farming; third, whether those in authority are or are not going to repeal the Finance Act of 1909; fourth, whether they have any idea of reforming the laws of rating, which burden development? We submit that until we have clear answers on these and a few other points it is premature to talk about Reconstruction, while if these questions are to be answered in the affirmative Reconstruction and Development will take place automatically without the assistance of the Government, whose functions should be confined to those of administration. Those who object to the proposals of Government departments must not be put down as being reactionary; our contention is merely that the greatest force in every community is the legitimate private enterprise of its citizens, which should have the widest and the freest scope. The country needs no general election to obtain a mandate for the energetic prosecution of the war or to ascertain its views as to the nature of peace terms to be imposed on Germany, but it emphatically does not want to give a blank cheque to any party to enable them to carry out a programme of Reconstruction after the war.

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Notes and Comments.

Town Planning.

WE intend to give a Town Planning Review every month, in order to give particulars and illustrations of what will be one of the most important branches of architectural practice after the conclusion of peace. We further intend to give a weekly series of Town Planning notes, giving particulars of any developments of current interest, these notes being written by one of the best known town planning experts. Although we hold strong views on the methods by which such future developments should be financed and carried out, and consider that there is no reason why improvements should not be effected by private enterprise, we believe as fervently as the most pronounced Socialist that it is necessary to take steps to promote the improvement of housing conditions and the orderly development of our urban and rural districts. These questions are, in our opinion, quite apart from political issues with which they should not be confounded. The function of Government acting through the municipal authorities is in our view to relieve the developers of land and builders from the restrictions which hamper their activity by reforming the laws of rating and by the repeal of the Finance Act, and we believe that if it is necessary for Government to assist housing by grants that these grants should be impartially distributed between municipal authorities and private individuals who are willing to undertake work in the interests of the community. But we hold it to be a fallacy to assume that there is any reason why rents should not be allowed to follow the upward curve induced by the increased cost of building, since wages will automatically rise to make good the difference, as they have that caused by the increased cost of food products.

Government Contracts.

A number of prominent Fellows of the Surveyors' Institution have written a joint letter to the "Times" calling attention to the immense amount of waste which is entailed by the abandonment of the contract system in Government work. They say that had not the most important Department of all, the Office of Works, maintained the contract system, the Exchequer and Audit Departments of the Public Accounts Committee would have objected long ago. The alternative system under which other Departments work is to employ a contractor without competition, and add a percentage on prime cost to cover his working expenses and establishment charges. Such a system encourages waste at both ends, for schemes given to contractors are usually not fully thought out, whereas the completion of drawings and preparation of quantities based on them would necessitate revision and reconsideration of points which would lead to savings being effected. Then, again, the contract system leads to the employment of a contractor whose methods of work are more economical than those of his fellows or who can obtain his materials at a less cost, and this advantage is stereotyped in his contract and made the basis for additional work. More than this, the contractor chosen has a direct incentive in promoting economy which is all to his employers' advantage. The L.C.C. Works Department was put an end to because of the alleged evils of the practice which is being so widely adopted. In addition to the points raised in an admirable letter, we might add that so many of the necessary war buildings have now been erected that there is far less reason than previously existed for Government works being rushed. We hope this weighty protest will have its due effect.

A War Shrine in Hyde Park.

Mr. Stephen Paget writes a very good letter to the "Times" protesting against the proposal to erect a plaster war shrine in Hyde Park, which it is suggested should be 70 feet long with pylons rising 40 feet from the ground, and on the top of each pylon there is to be a cone which symbolises eternity. In common with the writer we always believed that the circle symbolised eternity, and we agree that out of six million Londoners there are probably not half a dozen whose thoughts would be directed towards eternity by the sight of a cone.

We are afraid that after the war there will be a great tendency to erect memorials everywhere and anywhere instead of doing the best thing of all—spending money on worthily completing or adding to some of the great buildings and monuments which already exist. There are many churches which would be rendered far more interesting by the addition of fine memorial screens or reredoses, many buildings which might be completed by the addition of memorial wings. There is the great project of a memorial chapel in connection with Westminster Abbey, and though we may be considered as heretics for breathing the suggestion, we believe that Wren's west towers might conceivably be replaced with advantage. But even the war will not work such a revolution in English thought or habits as to convert us into people who, like the Russians, cross themselves and pray in passing shrines on their everyday walks through crowded cities. We should much like to see a well-considered list drawn up of projects the public might wish to complete, for we think it might lead to a better expenditure of money than is often contemplated.

A Complaint from Newcastle.

A working woman writing to a Newcastle paper complains that judging by the houses they build for the working classes architects must be ignorant of the manner in which the working classes live. She says that there is usually a waste of about 120 cubic feet in the parlour, while the sculleries and larders are wholly inadequate for those who have not the use of communal kitchens. We question whether most of the parlours provided are unduly large, and are quite prepared to admit that in many cases the larders and sculleries are inadequate, as they are also in the majority of small houses. The difficulty really arises from the fact that it is most difficult to arrange adequate provision for cooking in a small place, and more attention should be given to the advantages of the communal kitchen system.

A Small Competition, but Our Own.

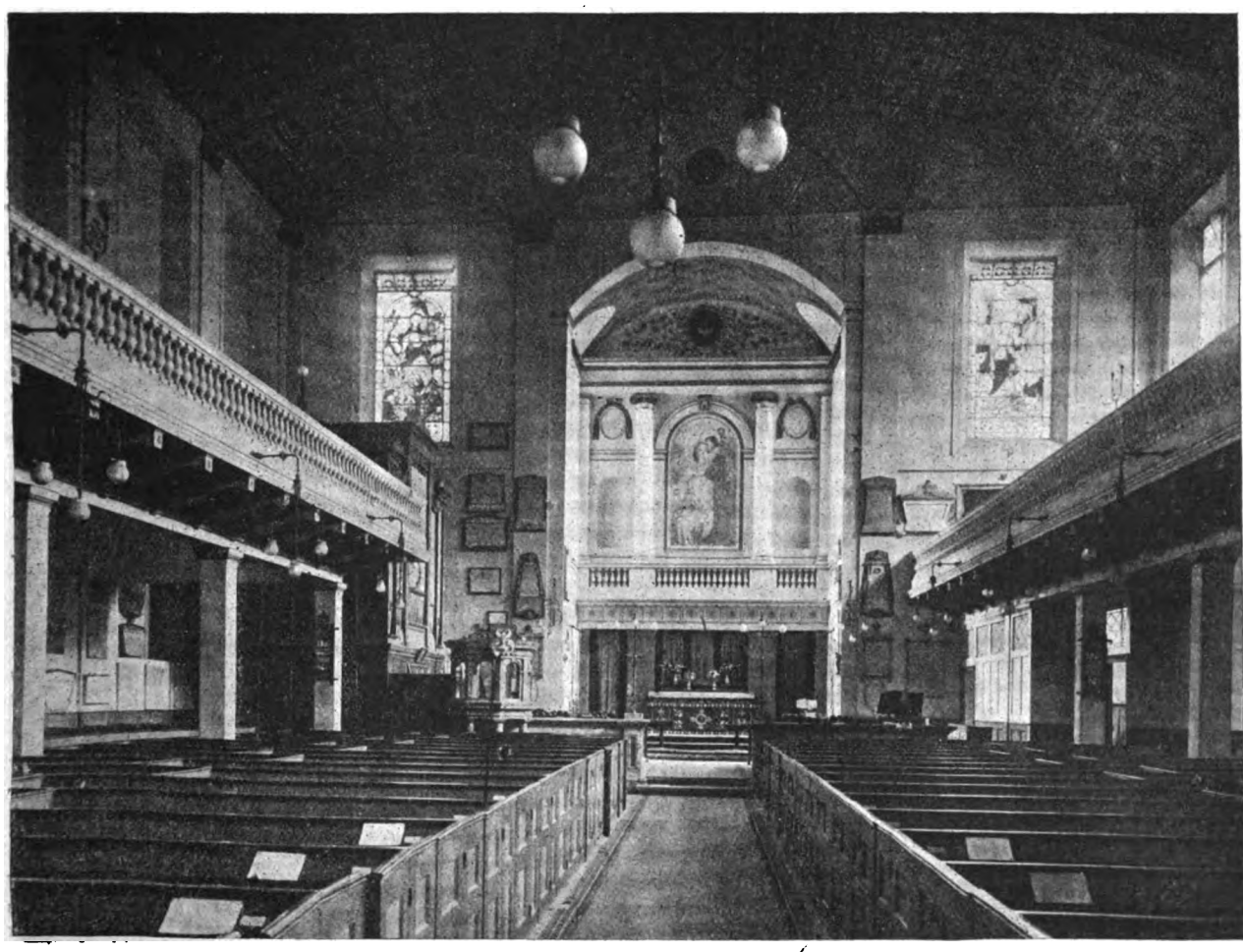
"The old order changeth giving place to new," and so although the title piece of our front page was considered a good example of design fifty years ago, we feel that another and a better one may well replace it, and form our house flag or mark for another half century. We have therefore resolved to institute a competition for designs for a new heading under the following conditions:—Designs are to be drawn in black and white, the heading occupying a space of 13¾ inches long by 5½ deep (double the scale of the actual heading), the lettering being "The Architect" in big letters, and under it in smaller letters "A Journal of Structural and Decorative Art." Designs are to be sent to us rolled and without any distinguishing mark, but accompanied by a sealed envelope containing the author's name and address. The envelopes will be opened after the Proprietors, assisted by their Editor, have made their choice. The author of the selected design will receive seven guineas, and a second premium of three guineas, and five more of one guinea each will be awarded to the best designs. If possible an exhibition of the designs received will be arranged, and we intend to illustrate several of them in our pages. Designs are to be sent addressed to us on or before December 10 next. The competition is open to all architectural students, which is a wide term, for are not most of us architectural students in a world which is plentifully furnished with full size models of what we should avoid in building? It is open to competitors to adopt any type of design and to employ symbolism or not as they may elect. Our wants are simple: we only want the very best thing we can get, which will amply satisfy us. Though we naturally want something which is clear and legible, we do not say with Bassanio that "ornament is but the guiled shore to a most dangerous coast."

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AN IMPRESSION OF SOUTHAMPTON,
WITH NOTES ON THE CHURCH OF ALL SAINTS.

SOUTHAMPTON is a town of quiet charm, neither vast nor unduly busy—that is to say, the trading part of it. Outside the barriers of the old walls where the wharves are marked by masts and funnels that spring up apparently from the middle of the sea there is a different character. The town is not grand, neither does it excel in outstanding beauty. There are plenty of odd corners and quiet streets where once the tide of fashion swept, a few miniature squares, and large, irregular, open spaces planted with stately trees. There are four churches of mediæval origin, two of which have tall spires; and on the site of what was in the remote past a Saxon village is raised the modern Gothic building which Street intended to be a monument to Bishop Wilberforce, although the architect did not live to see the completion of the spire he designed. In addition there are two or three churches of the Rickman cult, which are disdainful of the democratic nondescripts wherein Dissenters foregather; and last, but far from least, a Classic church, All Saints, of the late eighteenth century. Now if there is one thing distinguishing Southampton it is the lack of civic enterprise in the matter of public buildings. The Audit Hall, which Crunden designed, has long been relegated to the minor purpose of a mayor's parlour; vanished is the pedimented feature that spanned the opening between the lodges giving entrance to the steam ferry; gone, too, is the columned bathing establishment which stood where now stands an Italianate Dock Office.

In a word, there is little or no architecture of civic pretension in this seaport. Place one large and perfect building in the middle of any maze of streets and houses which have a sprawling shape, but no head nor torso, and the effect is changed. The town is represented in the outline of the building which dominates the mass. It is ennobled, and some part of the interest hovering about the great building invests the lesser roofs with dignity. Although Southampton sprawls, it is never monotonous. New districts have sprung up individually larger than the mediæval nucleus, green spaces have been enclosed, and the very marshes by the river Itchen have been stolen on which to bed the steel road from Winchester. Walk the High Street from the Town Quay to Above Bar, where the interest is varied; watch the ebb and flow of the traffic as it struggles beneath the archway in semblance to the mercury of a barometer, and we see but a repetition of what has been going on for hundreds of years; for between the houses of this slightly curving street has been, and is being, enacted no unimportant scene in the comedy of life. The main street of Southampton is the chief artery of this modern passenger station. No town in England can show such a variety of projecting windows, rectangular, splayed, and semicircular; all that the skill of the designer could do has been done for novelty. The bow windows, rich in detail and capped and stringed with delicate mouldings, reveal the jolly features of the people who lived when Dibdin flourished and wrote his songs of the Navy. Small wonder that a tablet should have been erected to his fame on the walls of Holyrood tower, but the poet lies buried in St. Pancras Churchyard, London. The bow windows in some instances have been added to older houses, as if respect had been paid to the local tradition of timber fronts which Leland wrote about in the early sixteenth century. Two such features grace the fine façade of the Dolphin Inn, surely the largest of their species in England, for the other windows of like type in this street are rendered small by comparison. In the midst of the shops and midway between the Dolphin and Bargate the bald front of All Saints Church arrests attention. At first glance we are tempted to pass it by, so gaunt it appears in its nakedness; then we



ALL SAINTS CHURCH, SOUTHAMPTON.

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notice the retrieving feature of an exquisite cupolette, rising above the harsh line of the roof like a miniature temple on the extremity of an island of stone. We pass in between the columns, and proceeding through a vaulted vestibule find ourselves within the roomy space of a magnificent church, where it is possible to forget the proximity of the sea and to imagine the contiguity of a neighbourhood akin to the shipping districts of Wapping and Limehouse. Who built the church? What was the name of the builder? Was an architect engaged? Such are the questions that run through our thoughts. The details seem familiar: that segmental ceiling recalls the work of James Stuart in the chapel at Greenwich; those consoles supporting the gallery and the ornament above the altar are in the style of Sir William Chambers. Then follows a review, in close formation, of the work of the men who held high reputations in the late eighteenth century.

Finally, after systematic investigation we find that Willey Reveley, a friend to Stuart's work and some time pupil of Chambers, was commissioned to erect the church in 1795, and that one John Hookey, a builder, interpreted the architect's plans. The old guide-books speak of the building as one of "chaste and noble simplicity, doing honour to the genius of its architect." Had the compiler of this information realised that Reveley was very young when the work was entrusted to him he would have been in a position to account for some of the obvious faults. Externally the church is severe and, with the exception of the cupolette, commonplace, save for the proportion of the tetrastyle portico of three-quarter columns, each thirty-six feet high, which in those days was well within the range of any carpenter to accomplish. One good point in the design was attained by the architect, namely, the spacing of the pilasters which occur immediately under the principals of the roof, which in their way are expressive of the elements of its construction. The cupolette, already referred to, which is the joy of the town and appears as a softening feature when viewed from a distance between the sharp steeples of the older churches, is built over the arch spanning the altar. The design of the cupolette is logical and direct. Six Corinthian columns, each fifteen feet high, are placed on a square basement. These in turn are finished with a circular entablature, on which stands a drum with a dial of three clock faces and sub-motifs of vases, the whole being terminated by a wrought-iron and gilt pine-apple and vane.

Internally pilasters of Greek type occur on the walls, with appropriate capitals, the mouldings of which are flat and run as continuations between the pilasters immediately below the entablature, and from this disposition as an impost springs the segmental ceiling with a rise of only eight feet, ornamented with slightly sunk panels and rosaces. No heavy columns, no protruding beams, intercept the light or sound, and it will be understood that the grace of the interior inheres in the sweep of the ceiling. It is a pity that alterations have been permitted to the gallery, which formerly ran completely round three sides of the church, and we cannot quite understand why the organ was removed from the time-honoured position at the back—a rule invariably followed by Wren and his school—to a position on the north side near the altar, which involved cutting away a portion of the gallery and breaking the rhythmic lines. Such is an example of misdirected improvement in these days. (See illustration.) The substruction is given to an arrangement of arched catacombs containing lead coffins enclosed in stone, a privilege of burial eagerly sought for by the relations of those who had expressed a wish to be buried beneath the floor of what they considered the best church in the town.

Here must follow a word or two regarding the career of the architect. Of his origin little is known, and he first appears on the architectural stage as a pupil to Sir William Chambers during the years 1781-82. Following the custom of the day, when young architects with little or no means sought the assistance of patrons to enable them to complete their studies, Reveley obtained the post of architect and draftsman to Sir Richard Worsley, and in company with the baronet journeyed through Italy, Greece, and Egypt, as the journal now in the R.I.B.A. collection shows. The young architect left England in the latter part of the year 1784, and was at Rome early in February of the following year, after which, attracted by the mystery of Hellenic remains, he made a lengthy tour in Greece, visiting among other places Athens and Rhodes, returning to London through Paris in 1789. Such experiences qualified him to edit the 1794 edition of Stuart and Revett's "Antiquities of Athens," and gave him opportunity to reply to the attack on Greek architecture made by his former master, Sir William Chambers. His own views regarding what was then thought to be a novel style, from whence an original system of design should spring, are explained in the character of All Saints Church, which contains details recalling the manner of Sir William Chambers, blended with features similar to those favoured by James Stuart at Greenwich. Beyond this church, his other executed works are few. There are a pair of lodges at Stourhead, in Wiltshire, and a house at Windmill Hill, Sussex. Among his designs are the following: plans for wet docks on the Thames and an infirmary at Canterbury; also an architectural fantasy, conjectured to be from his pencil, which is among the collection of drawings in the Picture Gallery at Southampton. Perhaps Professor Lethaby may find time amidst his many labours to write an article concerning the folio volume of tracings and drawings of ornaments by Reveley now in the Soane Collection.

The foregoing impression of Southanmpton is far from exhaustive. It attempts nothing more than merely focussing attention on the features of a seaport which for centuries has been the threshold to Southern England. No longer is the town essentially residential as it was a century ago. The newer suburbs are a medley of bricks and slate roofs, garden cities are growing on the surrounding hills, and colonies are springing up on the borders of the New Forest. There is a cosmopolitan flavour about the town, in which can be observed French and Italian elements. The shops are fine, the mediæval walls are crumbling, and immense factories occupy every vacant spot adjacent to the tidal waterways. Atlantic liners of 50,000 tons, towns in themselves, are moored in proximity to the old gates, and when they leave their absence is apparent. It is a bright town, approached from the north through an avenue of trees miles in length. Hampered by its geographical situation, expansion on definite lines is denied to it, save in one direction only, on the sea, from which the town and England draws its sustenance.

A. E. R.

CAPTAIN JOHN GIVENS KIRKALDY, R.E.S., is reported drowned at sea by enemy action. He was the eldest son of Mr. John Kirkaldy, M.Inst.C.E., of 101 Leadenhall Street, E.C., and Harlow, Essex.

COLONEL H. K. STEPHENSON, D.S.O., gave an address at the Danall Public Hall, Sheffield, on Saturday at the opening of the annual exhibition of the Horticultural Protection Society. The gallant Colonel stated, "I believe that this spread of the cult of the garden has come to stay. I foresee that it may lead to a great change in the habits and thoughts of our town dwellers." To people who had imbibed a love of the soil and of fresh air, rows of unlovely houses in twenties and thirties to the acre, set in streets unredeemed by a touch of vegetation, would become increasingly distasteful. The Town-Planning Act was passed largely with a view of preventing this system of housing being perpetuated, but it came too late to save many of the outlying parts of Sheffield. As chairman of the Improvement Committee when the Act was passed, he became chairman of the first Town-Planning Sub-Committee, and though the Act was a very difficult one to work, he believed that much had been done under it to ensure a better state of things in the future development of the city, such as the limitation of the number of houses to the acre, "through" roads of adequate width, and no "blind alleys," room for trees and grass verges to roads, and a general regard for the rural amenities so far as it was possible to preserve them. He was quite sure that after the war there would be an increased demand among those who had become garden-lovers to get away from the smoke of the neighbourhoods where large works were situated.

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THE ROMANCE OF LONDON.*

THERE are some books whose modesty almost disguises their value. A "Dictionary of London" is a book of this class. Looking, at the first glance, like a glorified version of the street index of the Directory, it might well be taken for something much less valuable than it really is. But it is only a first glance that would be so deceived, a second shows that every entry, however brief, is a condensed digest of a store of research. Not a street or yard or inn is mentioned except to be coupled with the author's epitome of the ancient authorities who refer to it. Sometimes the very brevity of the paragraph is evidence of the work put into it—the simple phrase "no later mention" means, for example, that the learned and conscientious writer has searched through a world of books and maps before he committed himself to the statement.

Sometimes, of course, the entry is of merely modern significance—or appears to be so. For example, it is without very high expectations that we turn up the street in which this office stands. "New Bridge Street" is there to be sure, and it is recorded that it was first erected in 1764. Further, we are told that it is so called as leading directly to Blackfriars Bridge. We can leave it at that if we will; but for those who wish to follow him into the romance that underlies the businesslike exterior of this printed page the author has a welcome. He hints before he leaves the subject that we had better refer to the entry "Fleet," and he has maps which carry still further the pleasures of a look into the past. One of these, applying to the west end of the City, opens up a wonderful vision of old world scenery. There sure enough is the spot we occupy, and we are as now at the cross roads. But what a difference. This is no Ludgate Circus. A broad way comes as to-day down from the north, but it is no Farringdon Street. It is a river with a path each side. Down below our windows where to-day stands the obelisk of Robert Waithman, there is a bridge whereby Fleet Street travels over to the great Lud-gate, a real gate in a real wall standing boldly on the breast of the hill. We cannot see the gate from our windows, but from the back of the house we can see above the tops of the lower roofs that spur of the City wall which breaks out westward from Ludgate and, as it appears, ends abruptly with a bluff square tower running sheer down to the Fleet waters. Left of us across the stream rises, again over house tops, the nave roof of St. Bride's, not Wren's St. Bride's, but the church of "St. Brigid the Virgin of Flete Strete," built in the thirteenth century, enlarged in 1480, and just recently repaired and beautified (1630). And what is that bell? The bell of St. Paul's? No, its sound comes not down Ludgate Hill, but from further south. We have gone back a century or two to hear it. That is no seventeenth century sound. It is older. That is the Angelus in the great monastery of Blackfriars, only 200 yards away behind and inside the City wall. Its church stands with its buttresses in Carter Lane, and its buildings stretch right across Printing House Square and down to Victoria Street. They have on the west a gate and porter's lodge in Water Lane, and on the east the Prior's garden overruns what we still call Friar Street, a street which, though newer than the monastery, was well established in 1677. Church Entry, a street of the same date, passes on a line which runs actually through the site of the great square tower which stood up between the nave and the choir of the vast monastic church, and was so called not from this church, but because it led to the church of St. Anne, once a chapel in the monastery precincts, kept up then as a parish church, and retained as such after the dissolution and destruction of the monastic buildings, but not rebuilt after the Great Fire. All these facts one may glean from the most interesting plan of the monastery which is superimposed upon the plan of our modern streets.

Those who knew the late Mr. H. A. Harben, the author of this book, will be able to value it as a very special memorial of a delightful personality. The many-sidedness of his life was as remarkable as the depth to which he carried every separate branch of his studies. It is easy for a versatile man to find pleasure, and even to find some measure of success in many different walks of life. It is by no means so easy for him to attain solid efficiency in each of or in several of those different walks. That Mr. Harben should have been at once the chairman of a very important company, a sportsman who enjoyed his sport, and a country gentleman willing and able to perform the duties that beset such a man's leisure is, perhaps, not beyond ordinary experience. But when it is stated that he was besides a keen and appreciative collector not merely of London topographical documents, but also of mediæval ecclesiastical manuscripts, a member of the L.C.C., an untiring worker among the governors of one of the great London hospitals, and a more than ordinarily good amateur sculptor, it becomes a matter of wonder that he should have had time and mind-energy for the work of which the present volume is evidence. We believe he had also a practical knowledge of chemistry, and it is certain that his acquaintance with music and architecture was exceptionally sound for an amateur.

He was a delightful talker, and one had only to spend a few hours in his company to discover that there was scarcely an allusion in the world of literature, art, or science that he would not accept and follow up with some astonishing evidence of his own excursions into the most varied regions of culture and thought. Poetry, history, romance and philosophy all came within reach of his versatile mind, and those who knew him as a friend and comrade know only too sadly how much poorer the world became by the premature removal of his delightful personality.

It would have been easy for such a man to write a book on London in the gossipy colloquial manner which combines anecdote with history, literary allusion with archæological lore and humour with research. But that was not Harben's idea of his duty to London. He had set himself, as a matter of fact, to the production of an edition of Stow's "Survey of London," to be accompanied with copious notes and illustrations. He must have worked at this for twenty years, and only abandoned it because in 1908 there appeared Kingsford's edition of Stow, and it seemed superfluous to produce another. The present work is the outcome, so to speak, of that abandonment. It is virtually, among other things, a corrective to Stow, and in particular runs counter to so many of those conjectural derivations which are a well-known feature of the older work. For example, Aldgate cannot be, as Stow thinks, "the old gate," for in all early spellings the "d" is missing; nor is he any nearer correctness in thinking Aldersgate to be an "older" gate still. Cripplegate our author derives from Anglo-Saxon words meaning a hollow underground passage, not from the begging of cripples, as Stow thinks. Yet here Stow had on his side the fact that St. Giles is patron of beggars. Instances of such corrections could easily be multiplied. Our only regret in this matter of derivation is that Harben, who had as good a right as any to make conjectures—they would not be guesses in his case—often after exploding erroneous origins stops short of offering his own suggestion.

Enough has perhaps been said to show that the whole book is a mine of careful archæology. As a companion to the student of London it is likely to become indispensable, for it is not merely a collection of the writer's own most modest opinions on many vexed questions, but a complete compendium of preceding evidences. In these days when the systematic study of London is happily becoming a duty of the many as well as a hobby of the few, such a work is bound to take its place as a standard work of reference.

It is difficult to express our acknowledgments to the late author without referring also to the industry and ability of the lady, Miss Isabel Greaves, who co-operated in the work, and finally brought it single-handed to successful publication.

* "A Dictionary of London." By Henry A. Harben, F.S.A. (London: Herbert Jenkins, Ltd, 1918.)

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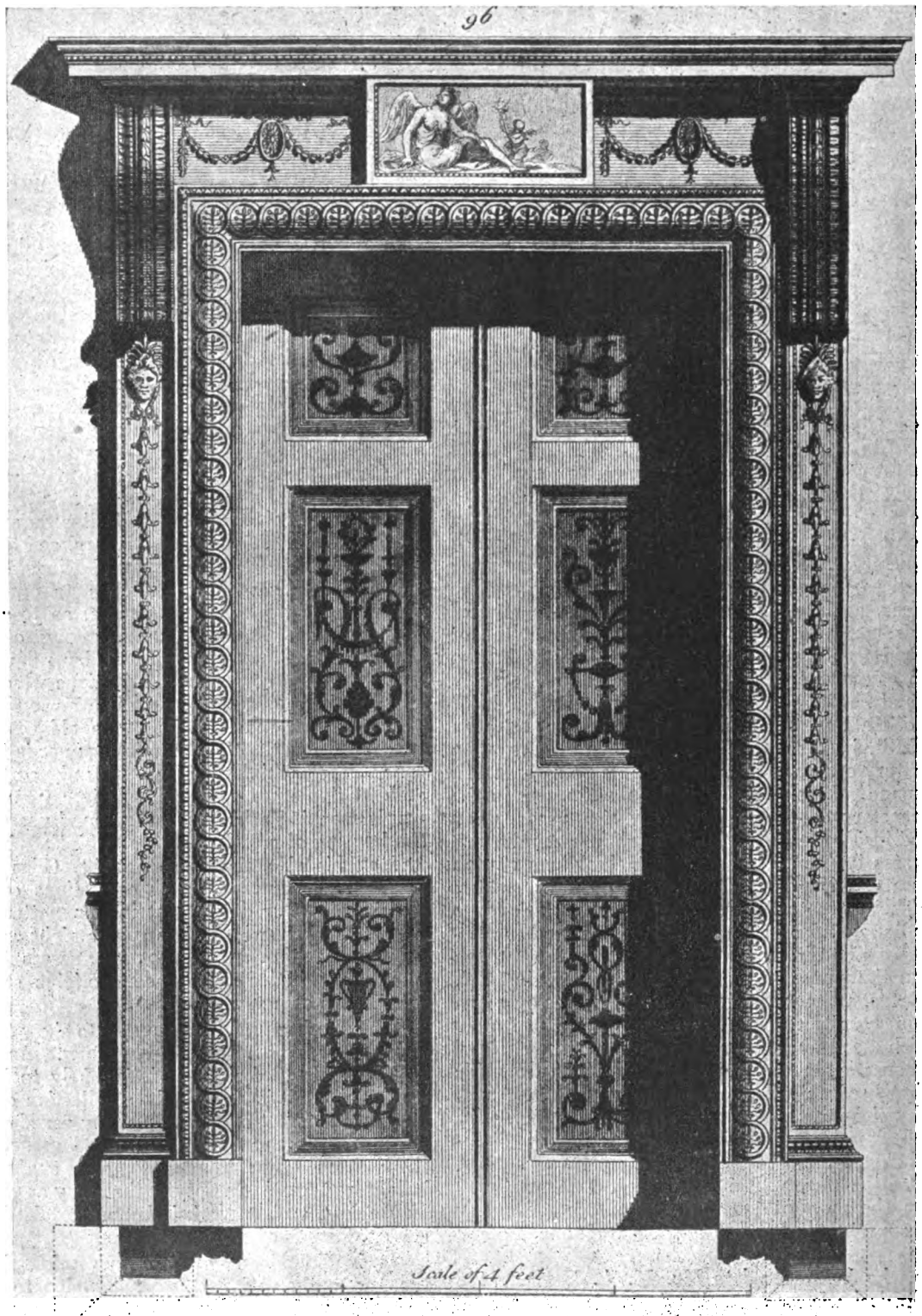
ILLUSTRATIONS.

ROTHAMSTED EXPERIMENTAL STATION, HARPENDEN, HERTS.

WE publish to-day some further details of this building (Messrs. P. B. Freeman & V. T. Hodgson, architects, 6 Gray's Inn Square, Holborn, W.C.). A general view of these important buildings, where much valuable scientific work is carried out in connection with agriculture, appeared in our issue of November 2, 1917.

COAL VERSUS RECONSTRUCTION.

WE are told by those in authority that the coal crisis is one of the most serious difficulties we have had to face, and that it has a most important bearing on the successful prosecution of the war, since the output of our munition works, the working of transport by rail and shipping, and other necessary operations now that the French coalfields are in enemy hands depend on it. Yet our authorities, who have time through their Ministry of Reconstruction to lay down huge plans for after-war projects, have apparently overlooked the cardinal difficulties which face us to-day. Now, in the eleventh hour, the Coal Controller has made drastic regulations and proposals in order to limit the household consumption of coal, one of the latest suggestions being based on a series of experiments of the temperature produced by an open grate with the register partly and wholly opened. There is little doubt that the present difficulties in which we find ourselves will lead to more attention being devoted to systems whereby we may conserve the great bulk of heating energy which now escapes vertically from our open fires, and we intend to devote space at an early date to the discussion of some of the proposals, which include the provision of a common hot water supply to a number of dwellings, communal cooking arrangements, and the scientific application of heat in ordinary middle-class houses.



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DESIGN OF DOORWAY.—PERGOLESI.

Monthly Review of Decoration and Furniture.

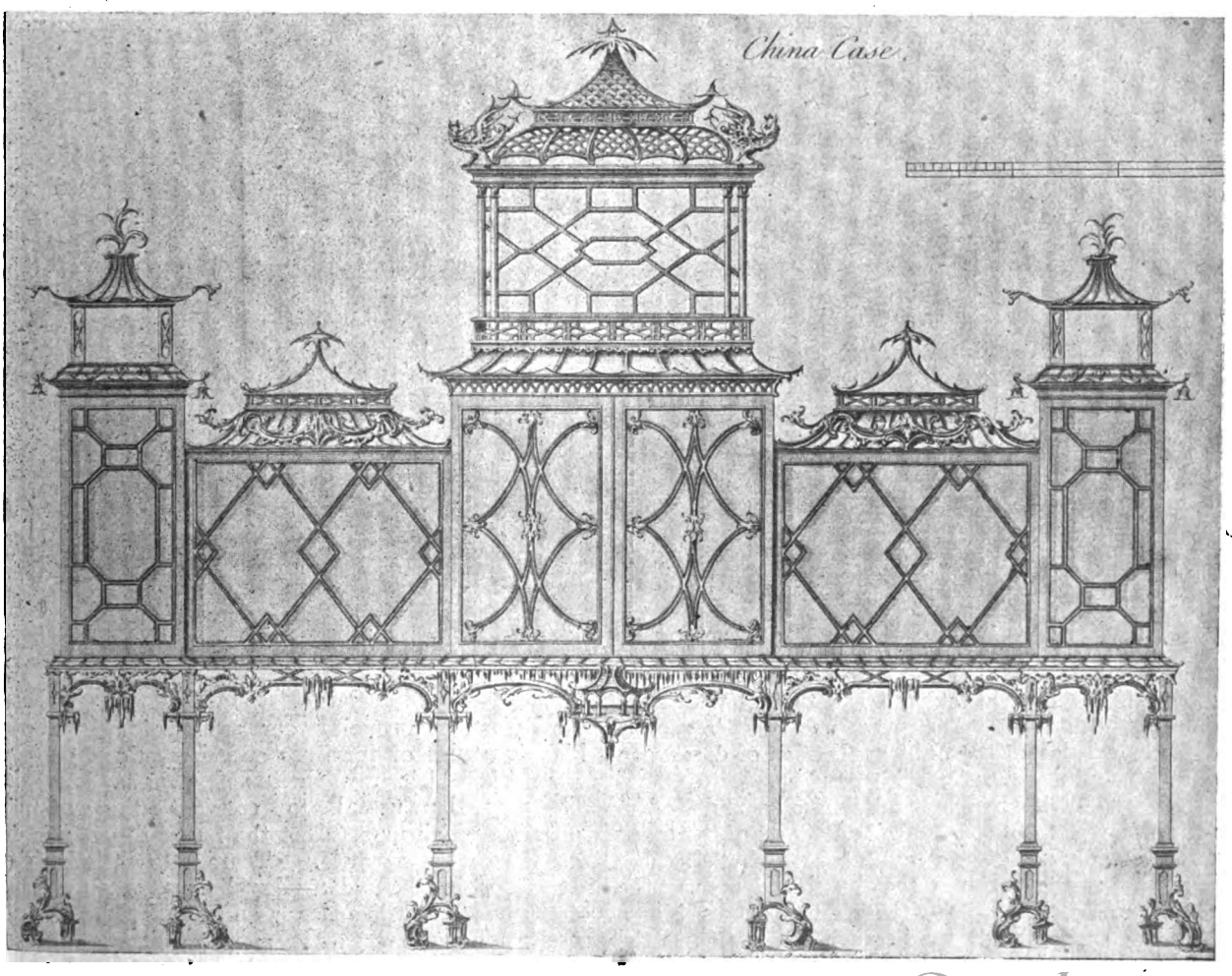
The Relation of Decoration, Furniture and Architecture.

THE architect's calling embraces many of the accessory arts, and it is difficult if not impossible to define its limits. But as the early centuries of the Christian era saw the outlying provinces of the Roman Empire deserted by its legionaries and one by one falling into the power of barbarians, under whose misrule the records of a great civilisation were effaced, so the architect's functions became more and more limited in the early and middle years of the nineteenth century, till architects for the most part became the designers of shells which were decorated and furnished by men of other callings, too often entirely ignorant of the fact that there is in reality but one art whose varied manifestations should be harmonious and consistent. The severely "professionalised" and limited architect, no longer a worker in a field tilled by the joint labours of fellow craftsmen, lost sympathy and touch with the public whose *lares* and *penates* were fashioned by other hands.

Fortunately, though much of the evil blight still lingers and obscures the horizon, the best architects now take wider views of their functions, and the field of furniture and decoration appeals to a widening circle both of students and of men in actual practice.

It is difficult to adequately design a house without a fairly good knowledge of the taste and wishes of those who will occupy it, as expressed in the furniture they have, or may wish to acquire, and the architect who is qualified by knowledge and education to advise on such points will find it easier to do his part in producing the desired result, for while with the architect the actual structure may be the goal, the client will usually regard it as a framework to safeguard his possessions. Then, too, if we think we realise the importance of decoration and furniture. The apparent proportion of rooms can often be completely modified by variations of decorative treatment, unpleasant mouldings almost obliterated by a colour scheme. An instance of the different effects produced is given in the contrast between the French habit of making the cornice of a room as a continuation of the walls and the English manner of making it a part of the ceiling by including it in the same colour treatment. The one treatment increases the apparent height of a room, diminishing its apparent area, while the other has the contrary effect. The same result can be produced by making the skirting a colour continuation of the floor or a prolongation of the wall. These are examples of the value of colour decoration in its simplest application. When we deal with decoration in its more complex manifestations we have the varied treatment of the fireplace from the purely architectural hooded or canopied Gothic chimney piece, through the early Tudor and Renaissance periods, in which the oak chimney-piece was often a more elaborate part of the general wall panelling, to the modern examples, often a thin wooden fromework fixed with holdfasts round a tiled grate removable in a few minutes. We cannot imagine some architectural styles—of which the Louis Quinze is a typical example—without the furniture and decoration which were always an integral part of the general scheme, for a complete scheme not only depends on the placing of fixed mirrors and their decorative adjuncts, but on the right placing of console table, the adjustment of painted wall decoration and their place in the general scheme, together with the design of the lighting fittings; and the same may be said of the more restrained and delicate work of the Louis Seize epoch.

The history of decoration and of the development of furniture is closely connected with the gradual growth and sub-division of the art of fashioning wood, and the



CHINA CASE.—(From Chippendale's "Gentleman and Cabinet Maker's Director.")

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craft of the carpenter is the original foundation on which first the joiner's work and at a later date that of the cabinet-maker and upholsterer were founded. As is natural, we find that in France, where decoration was always more closely studied and a higher standard of luxury prevailed than here, the subdivision of the decorative arts was more pronounced, a fact of which we have evidence in the greater number of the craft associations which found expression in the companies of Paris compared with those of London and other English cities, and the greater the tendency towards meeting the demands of a more complicated civilisation become the greater will be the tendency in this country to learn from and incorporate the results obtained by French masters of crafts. The decoration of our clubs, theatres, and restaurants is a case in point, and the architect who has to deal with such buildings will find it more and more necessary to acquire a wider knowledge of the right application of decoration and furniture in connection with building.

It is usually impossible, and generally undesirable, for the architect to become a facile designer of the many complicated adjuncts of arts connected with building, but it is necessary and desirable that he should possess the general knowledge and taste which will render him a good and competent adviser in such matters, and the more he can work with and direct the men who have devoted their lives to the study of special branches the nearer he will be to becoming competent in the sense in which the masters of building and great architects of the past were in the centuries which are gone. What we should define as being the architect's rôle is to acquire the knowledge which will enable him to advise his clients well, and to generally direct the execution of those who practise the auxiliary arts which have been too long divorced from that close connection with architecture which is so essential.

In order to further this object, and also to give matter which may be of interest to our readers, whether they are architects or members of the public, we propose to give monthly a section dealing with decoration and furniture, consisting of articles and also of notices of good furniture which may from time to time be for sale in London and elsewhere.



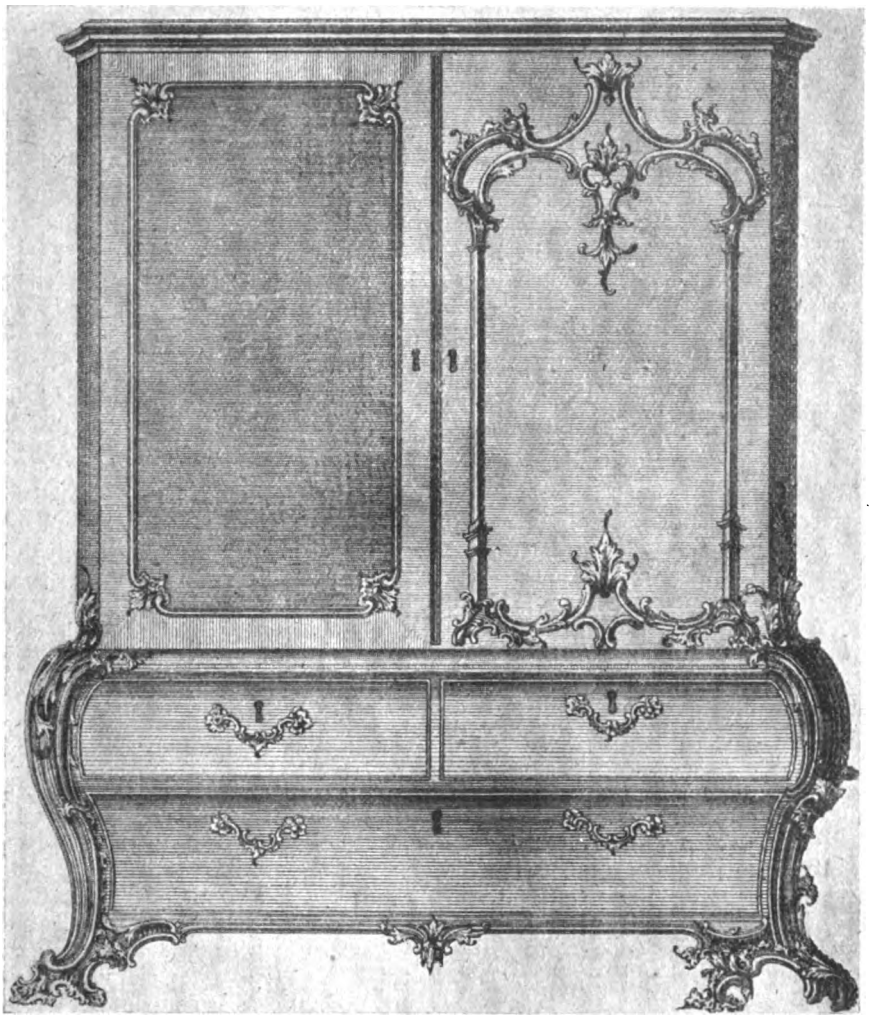
CENTRE OF CEILING.—PERGOLESI.

Personal or Collective Design?

Before commencing our series of articles on the historic styles of furniture and decoration, the general plan of which we shall define in a later issue, it may be useful to consider the fundamental question which must affect the future of æsthetic design considered as a whole. There was little division of functions in the old mediæval days, when a band of craftsmen worked under a master builder, himself a craftsman, and when the simple fittings which served the purpose of modern furniture were the direct work of the carpenter. Indeed, we may say that in many cases the roof which is generally now hidden and purely

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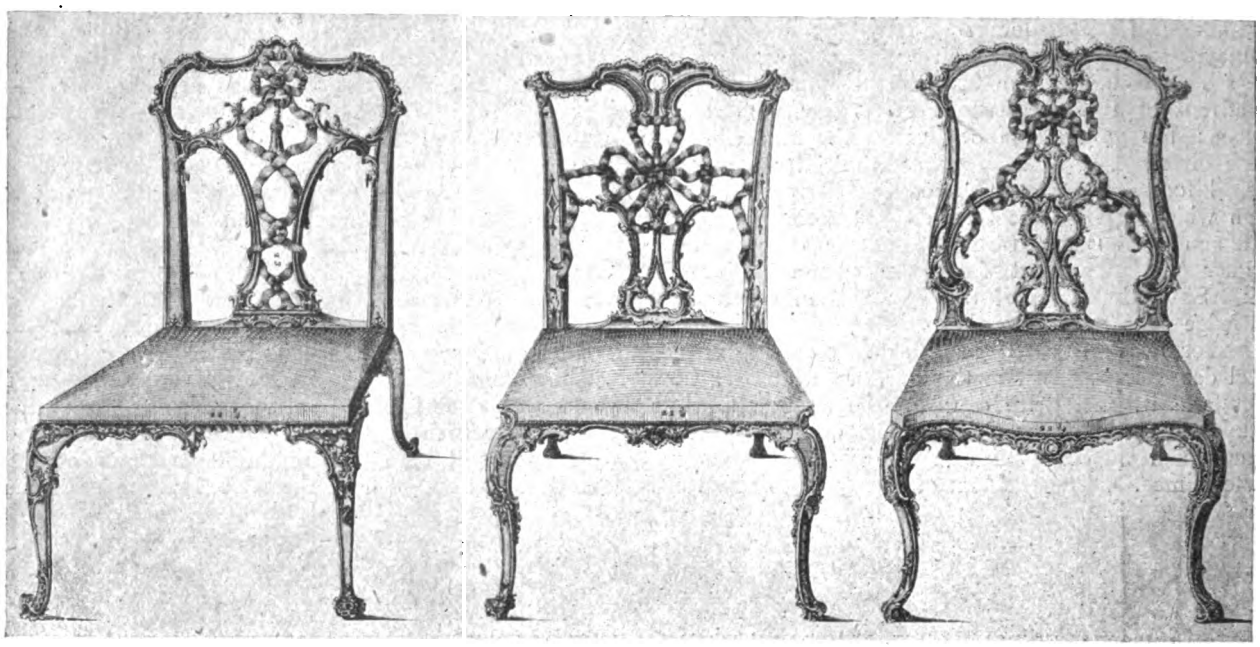
structural was the most elaborately decorated part of the interior of our buildings. Both the doorway and chimneypiece were more often than not slightly emphasised parts of the general oak wall panelling. With the advent of the Renaissance all this was gradually changed: the greater use of plaster, the multiplication of the divisions of dwellings, and the introduction of classical forms and details introduced complexities into design which the architect as distinct from the handicraftsman dealt with from the new standpoint of a designer working apart from the executants of his work. Still, the effect of tradition and inherited craft knowledge was so strong that the architect was more a director of the trained activities of others than the actual designer of detail in the sense in which we now understand it, and there can be little doubt that this attitude gave our old work a completeness and note of vigour which we often miss in the more finished work of later times. The problem of to-day is to make use of the drawing-board as we must, but to escape, if possible, from its narrowing and confining influence, and to cultivate the unity of the arts, so essential to the proper understanding of any of them, by promoting in every way the joint co-operation of architect, artists and craftsmen. One branch of design insensibly fades into and becomes part of another, which those of us who look at things from too narrow a standpoint are inclined to study as a thing apart. Thus while decoration as we understand the word is an integral part of architecture and its internal expression, it also approximates towards and merges into furniture design. The fixed seat or bookcase parts of the wall treatment of our buildings have as their variants the bookcase in the form of a separate piece and the chair. Fixed mirrors are often integral parts of an architectural composition, while at other times the mirror becomes simply a piece of furniture. A corner cupboard may frequently be a portion of the internal design of a room, at others a piece of movable furniture, and so we have a gradual chain joining the movable piece of furniture and the building which contains it in two unbroken series of structural design. It is evident that if this is not sufficiently realised we shall fail to give our modern work the harmony which we are all conscious of in that of the past. The past history of design since the Restoration in 1660 is marked by the ebb and flow of the architect's influence in matters affecting interior design. Under Wren, Gibbs and Vanbrugh there can be said to be no question. The directing architect with the help of the craftsman, steeped in old tradition, carried out every part of a building and the products of the accessory arts which were called into requisition. The country craftsmen all over the land were responsible for work which, while ruder than that which was designed by great architects, still bore the unmistakable mark of traditional expression. With the advent of the more mannered and learned architects of the eighteenth century, Sir William Chambers, Adam and Kent, there came a marked difference—the attempt on the architect's part to design every detail and every feature, not only the architectural inner and outer parts of his buildings, but the furniture and fittings placed in it. It is recorded that Robert Adam designed a counterpane, and Kent was overwhelmed with applications from ladies of fashion for dress designs, for one of whom he designed a dress illustrating the five orders of architecture.



COMMODE CLOTHES PRESS.—(From Chippendale's "Gentleman and Cabinet Maker's Director.")

The work of the great eighteenth century furniture designers, Chippendale, Heppelwhite and Sheraton, may probably be taken as an evidence that there is a limit to the versatility of mankind, for none of the furniture designed by the accomplished architects of a century noted for its cultured design reach the same standard of merit: the bow of architectural attempt had been drawn too far and had been overstrained in the effort,

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RIBBON-BACKED CHAIRS.—(From Chippendale's "Gentleman and Cabinet Maker's Director.")

and afterwards followed the long dark period of the nineteenth century, in which the architect lost all hold and direction of the allied branches of design on which so much of the effect and success of his work depend. With a few occasional exceptions we doubt whether the architect is likely to become a good designer of furniture, or whether the time spent in designing such accessories is profitably employed; but there can be little doubt that he is wise in obtaining a general knowledge of a subject which is intimately related to his own, and is in the opinion of many of his clients even more interesting and important. And there would be an undoubted advantage in promoting the closer co-operation between architects and those who must be employed to carry out their ideas —we refer to some of the great decorative firms who employ noted craftsmen. We want to get rid of the imaginary walls which terminate the interest of different agencies employed in building and design. The decorator and the furnishing firms should not be called in when the architect's work is finished, but while he is there, to consult with him as to the general idea to be carried out, and to help him by the expert knowledge which they possess. And there can be little doubt that it is wise if the architect learns to leave matters of detail to trained craftsmen; if in designing an iron gate he rather supplies the craftsman with a sketch than a full size detail, the carver with an idea, and not with a finished design. The one process means that we are encouraging the tendency to produce mechanical work; the other, that we are doing the best we can in the present day to gradually create a tradition and a school of workers which may in time partially take the place of the influences of the past which were instrumental in creating the treasures which we prize. Most modern design, especially in furniture, fails because it is too individualistic, and the attempt to emphasise individuality often has bizarre effects. The examples of the best that our historic tradition has produced are probably as good guides as we can have to follow until new conditions and wants bring automatically in their train modification of treatment and form.

The Illustration of Furniture and Decoration.

We have selected a few illustrations from three old works, a book of decorative designs by Pergolesi, who with Zucci and Angelica Kauffman and other clever artists assisted Adam in the preparation of many of his decorative schemes. The two examples selected show the design of the centre panel of a ceiling and that of a door case. Besides these we give three illustrations of Chippendale's "Gentleman and Cabinet Maker's Director," a work published in 1754, while further additions appeared in 1759 and 1761. The illustrations show three of the well known ribbon backed chairs, a china cabinet of a florid type, and a clothes press. Few of the designs shown in this work, which like others of the type was practically a catalogue, were actually executed as shown, but they are good examples of what was supposed to be likely to appeal to the taste of the times. Further illustrations show designs for four chairs from Heppelwhite's "Cabinet Maker's and Upholsterer's Guide," a work published in 1788, by which time a less florid and more restrained type of design found favour, to be superseded at a later date by the greater severity of Sheraton, the last of the great English designers of furniture.

The series of articles which will be commenced on October 18, and continued monthly, will be illustrated from photographs specially taken for the series. The articles will be contributed by Mr. Ingleson C. Goodison.

A FRAGMENT FROM THE PAST.

RECENTLY when underpinning a party wall near the river some workmen discovered an old discoloured fragment of parchment preserved in a sealed bottle. On exposure to the air the parchment broke into fragments, but before it was destroyed a student deciphered the following, which we give without comment. The date of the fragment is unknown, nor can the circumstances to which it refers be traced. Possibly some of our readers can help to make the matter clear. We have modernised the spelling and phraseology:—

10. Now in the dark days of which we have spoken was the kingdom in great danger because of the number and strength of its enemies, for the great ones who dwelt in the land had said smooth things nor had they prepared for war.

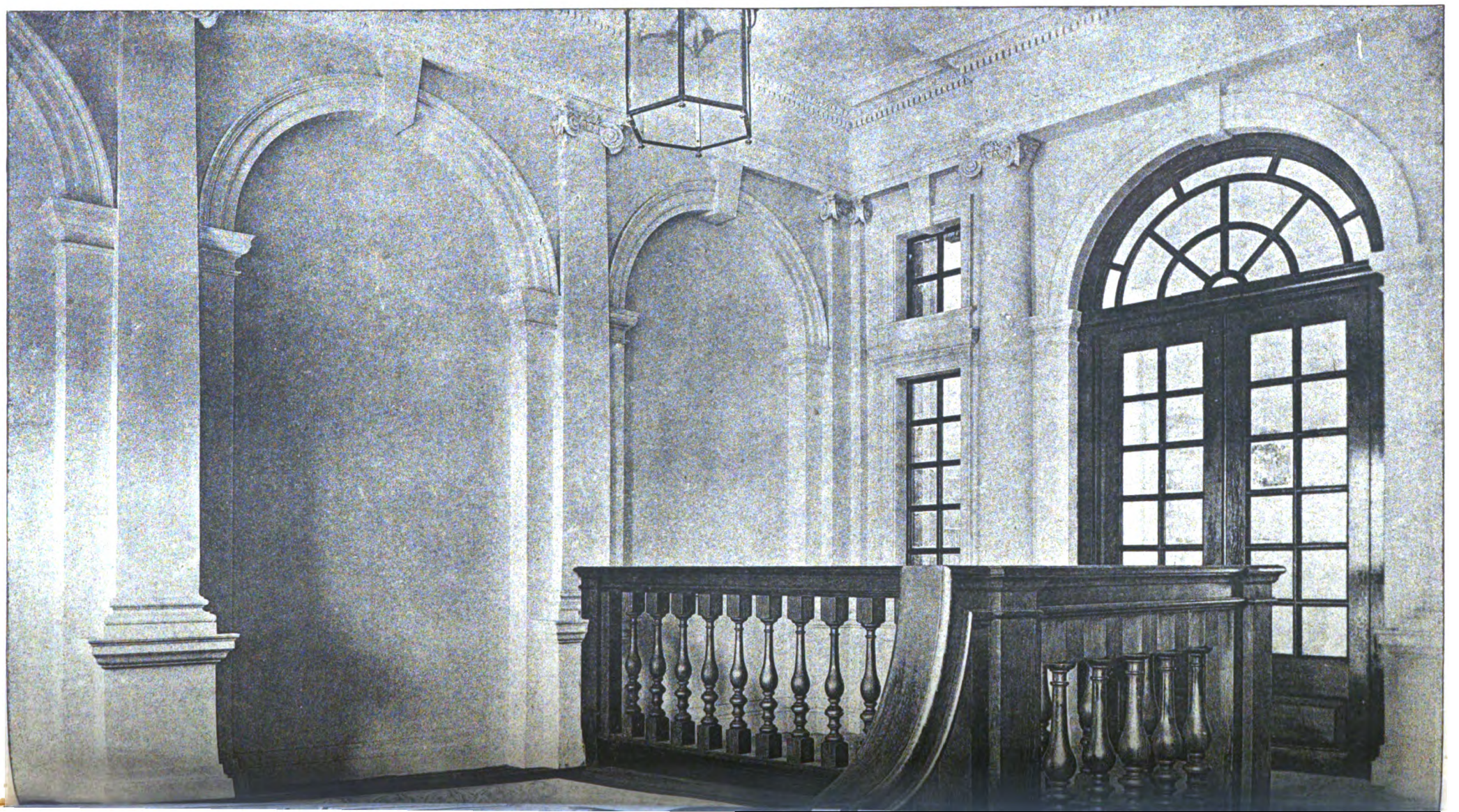
11. And in great difficulty had they armed men and sent them ill-prepared that they might stay the rush of many enemies, which they did, and many perished gloriously for the country they loved, and to save their fellows who abode at home.

12. And those who governed made great preparations which took many moons, and equipped large force of men whom they called to fight under the banners of the King, even after many meetings and much time, proclaiming "Let all who can fight gird their loins and take their place among the defenders of the land."

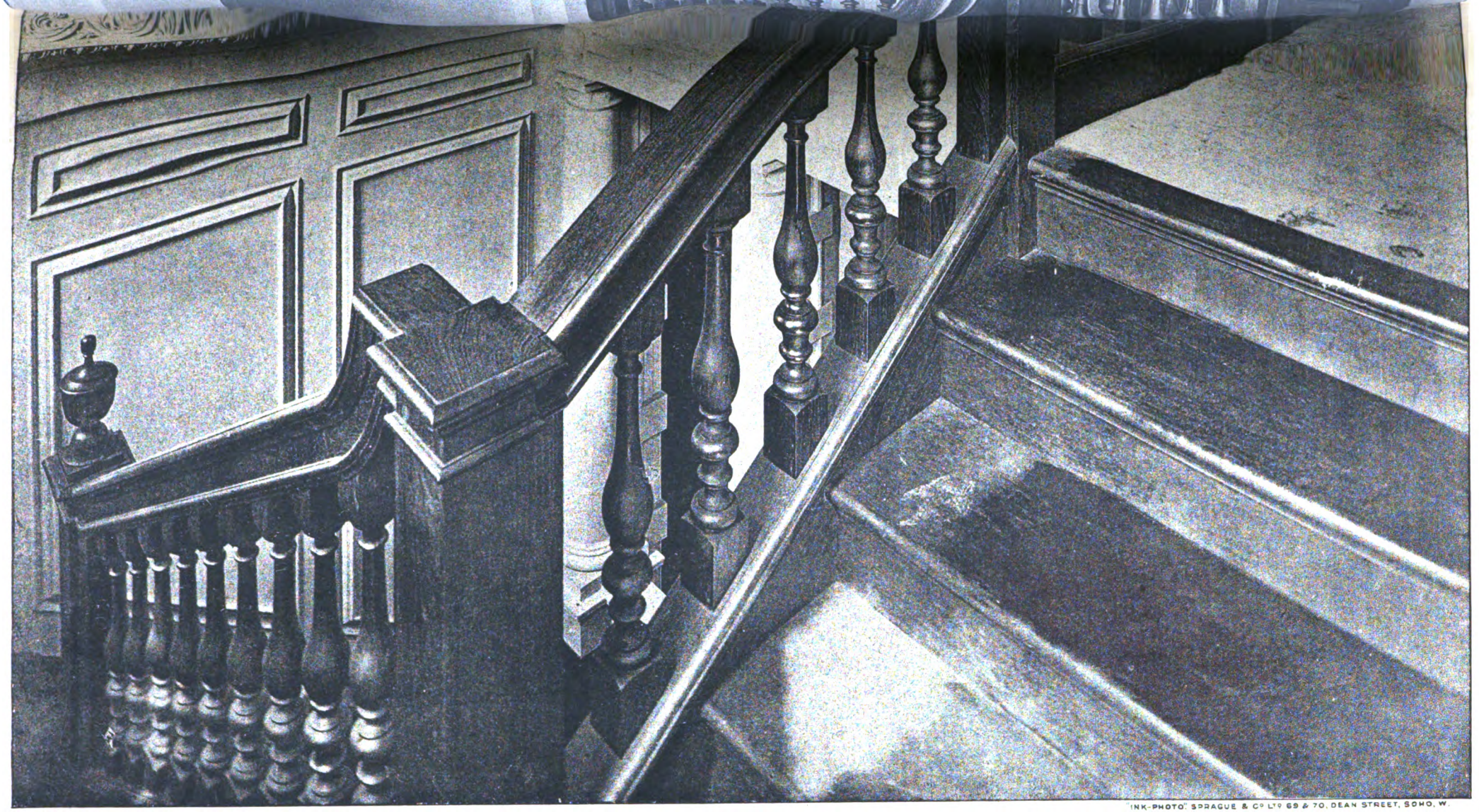
13. And so it fell out that after the circuit of many moons, yea, even when our mother, the Earth, had seen winter more than once, the stroke of the enemy was

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INK-PHOTO: SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

ROTHAMSTED LABORATORY. STAIRCASE AND ENTRANCE TO LIBRARY (No. 2).

P. B. FREEMAN & V. T. HODGSON, ARCHITECTS.

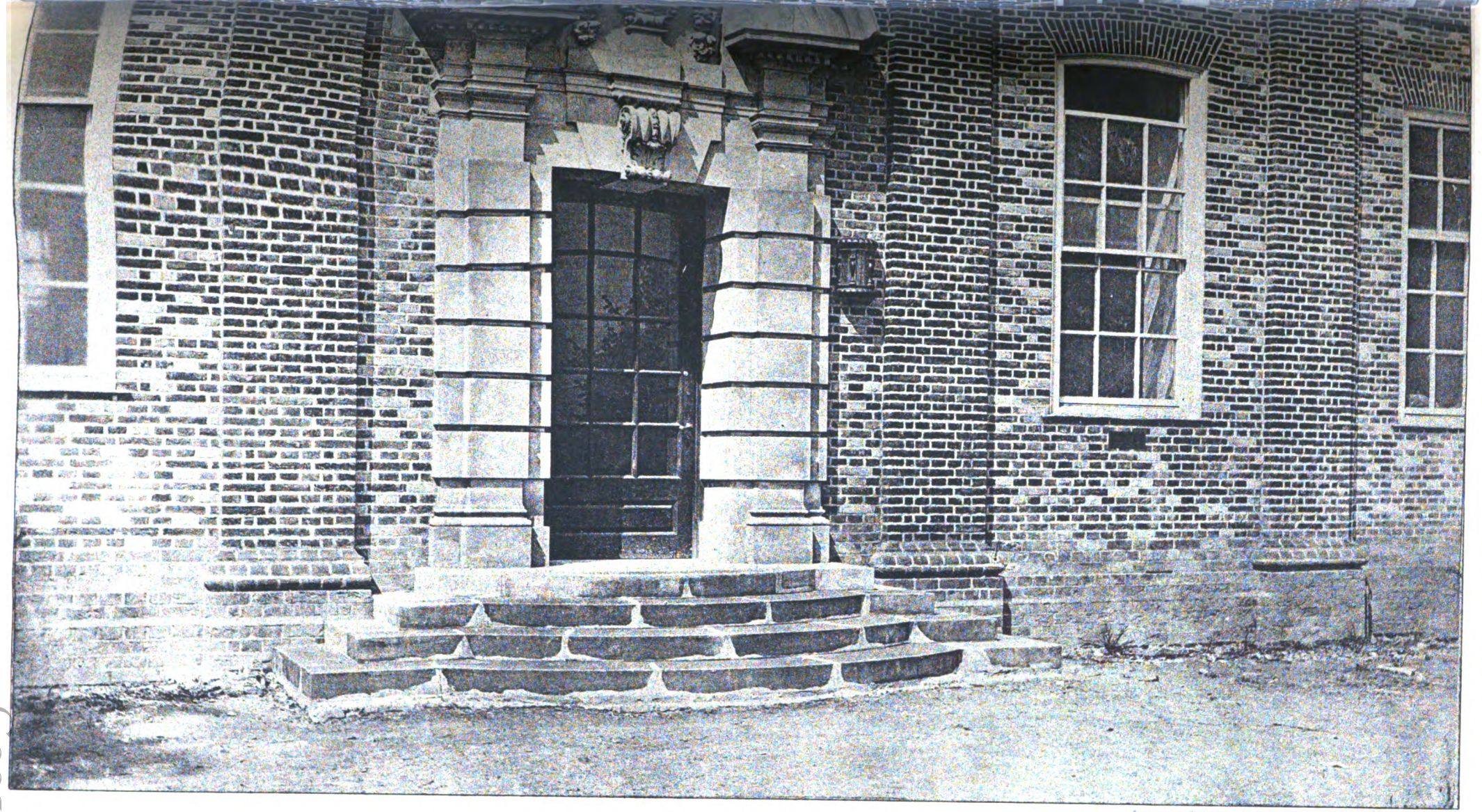
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"INK-PHOTO." SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

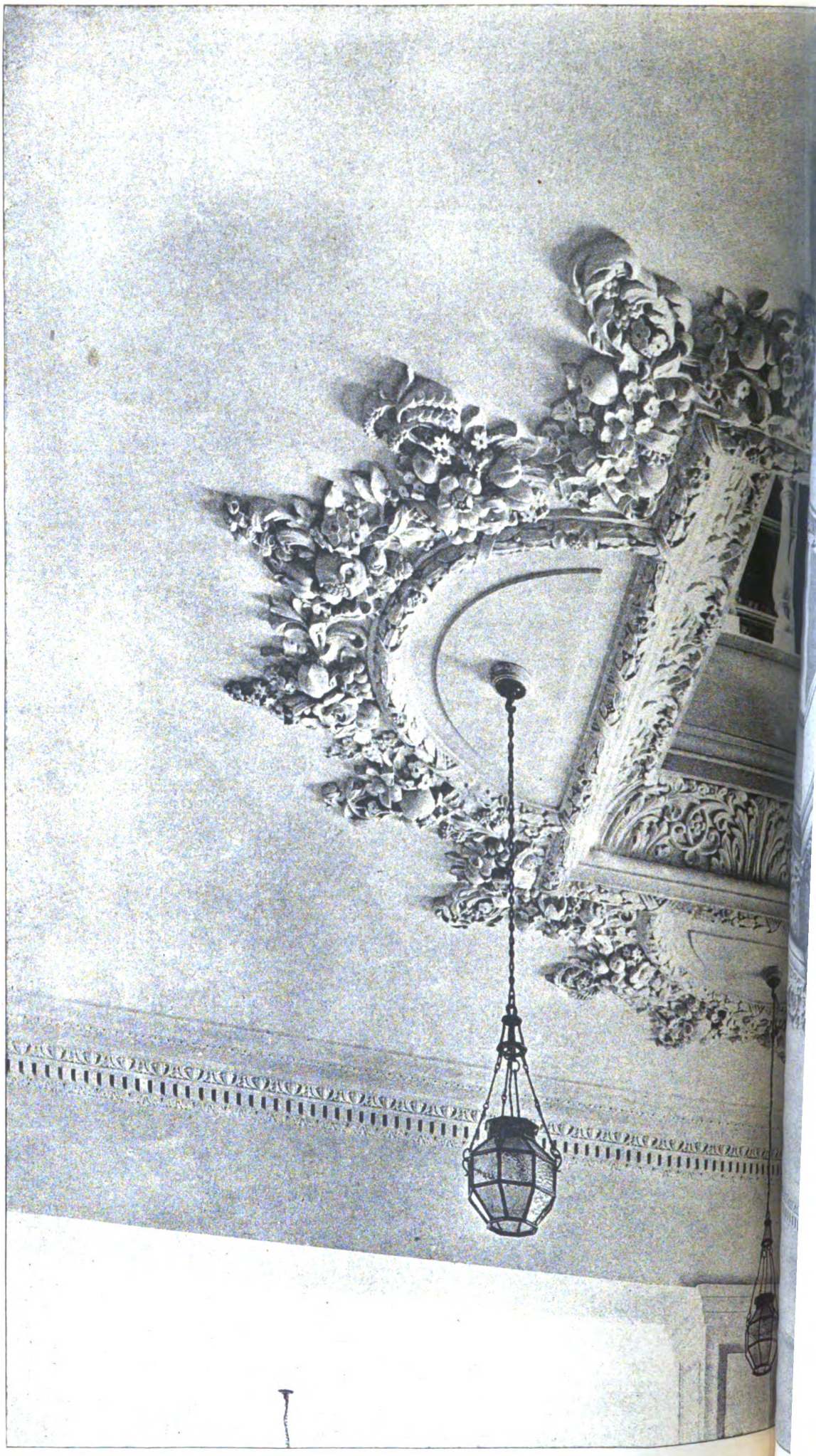
ROTHAMSTED LABORATORY. ENTRANCE DOOR, ETC.

P. B. FREEMAN & V. T. HODGSON, ARCHITECTS.

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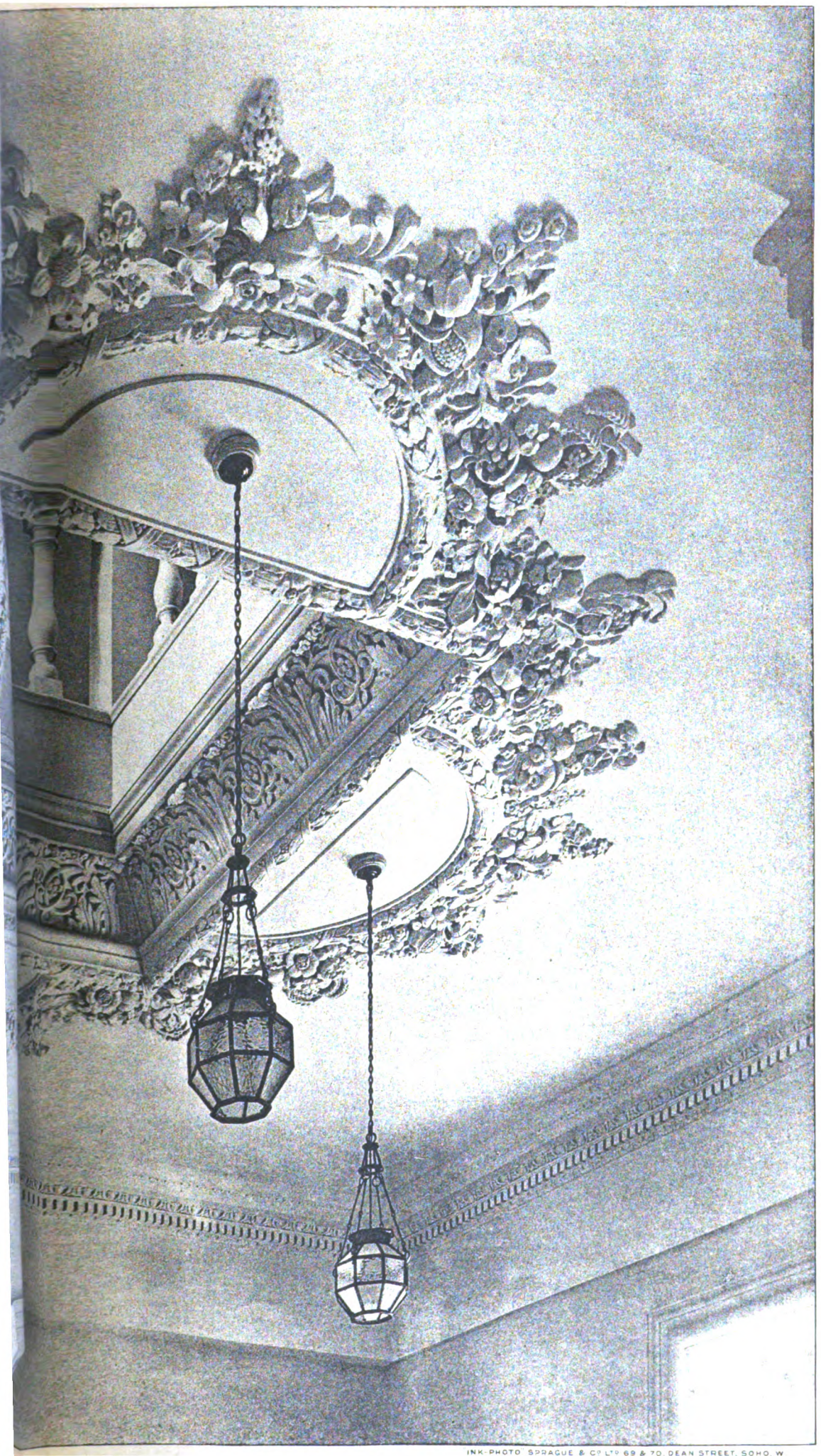
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ROTHAMSTED LABORATORY.
P. B. FREEMAN
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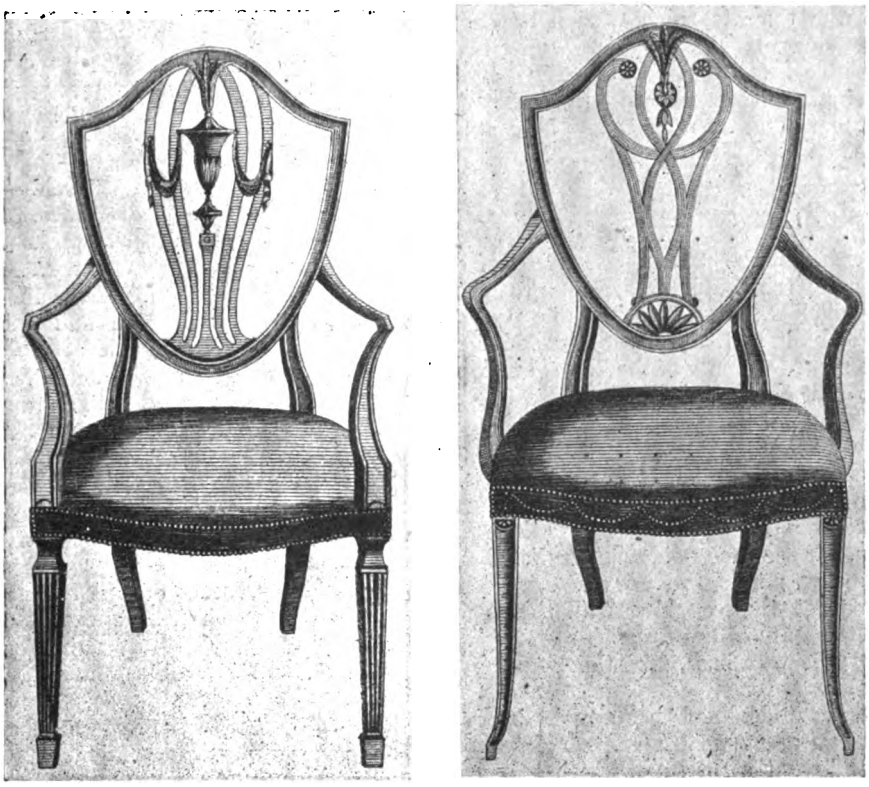
INK-PHOTO SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

LING BENEATH LANTERN (No. 3).

SON, ARCHITECTS.

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CHAIR.—(From Heppelwhite's "Cabinet Maker and Upholsterer's Guide.")

stayed, and his power no longer bore all before him, nor were his conquests easy as in the beginning, nor the toll of the cities which he delivered up to the sword without number.

14. And the wise men of the kingdom gave orders that the workers in the crafts should forge weapons for the soldiers, and many new buildings should be builded that they might have shelter in their labours.

15. And lest the soldiers of the King should lack what they needed, the wise men seized buildings, and made order that none should build save under permits with the seal of the King's signet thereon.

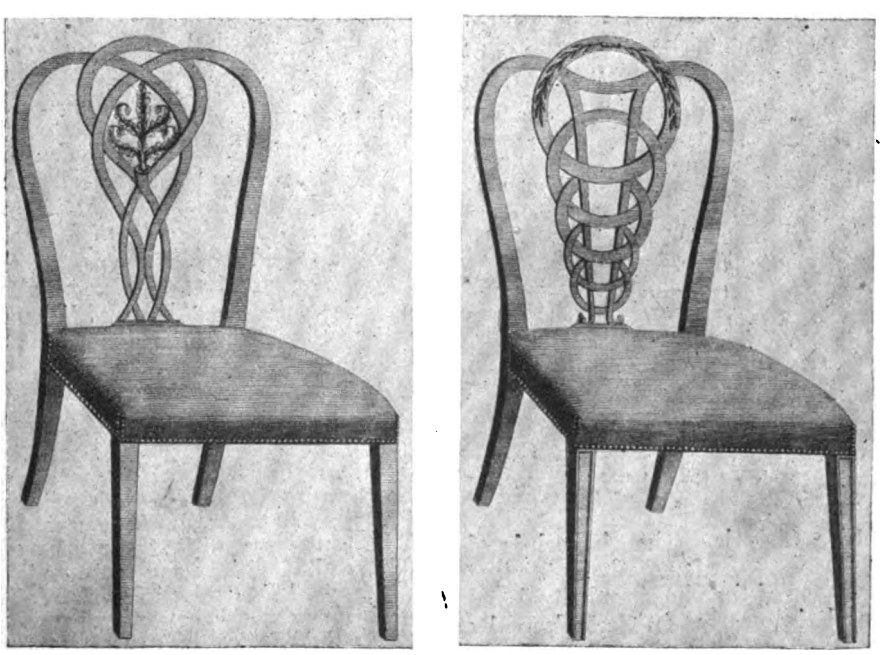
16. And overseers appointed they, so that the buildings needed for the King's purpose might be straightway builded, and many might fashion weapons therein.

17. And the overseers collected men in thousands to make devices for the King's buildings, and these men were exempted from bearing weapons because of their age or infirmity, and paid out of the moneys which the subjects of the King gave to the income gatherer.

18. And the overseers of the King's buildings said one to another, "Lo, this pleaseth us much; such good times were not beforetime nor will be after our enemies have been vanquished, unless so be we make a cunning plan to throw dust into the eyes of all men."

19. And softly stepping and going privily among those who laboured with their hands they whispered unto them: "Would ye have fair houses builded that ye may occupy for little recompense?" and the people not understanding their cunning said, "Yea, it liketh us well that this should come about."

20. And they communed with those who sat in high places and who liked the applause of the people, and these said, "Let no man build when the war is ended for many years, save he build houses under the permit of the King."



CHAIR.—(From Heppelwhite's "Cabinet Maker and Upholsterer's Guide."

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21. And because the King had taken the shipping of the merchants for war the wise men wished to ordain that they should retain them when peace was again in the land, and only give what the builders needed under the King's permit, that multitude of little houses might be built by the overseers and by none others save under grievous restrictions.

22. And the people were full of thought of the great war and of little else, nor watched they the plottings of the overseers . . . . . .

46. After the signing of the peace did the men of the country, and especially the builders thereof, groan because of the power which was exercised by the overseers.

47. For they who built and those who directed them could not obtain the signed permits of the King, and were forced to seek alms that they might have whereof to fill their stomachs.

. . . . . mighty uprising. . . . . the houses of the overseers were overthrown and . . . . . wise men made an end to regulations.

97. So in the end was there peace as before the great trouble and uprising, for each man did what he listed and built the buildings he was paid for, nor did even those who worked believe that they could get all things for nothing, nor were the names of the overseers recorded in brazen letters with those who had saved the kingdom in the days of its trouble.

98. For was it fully understood that nought is made by the wise men, but great wealth cometh from the toil of the people, and what a man maketh that may he spend, nor is there profit in paying many taxes.

ST. PATRICK, NEWPORT, CO. MAYO.

THIS new church has been designed by Mr. R. M. Butler, of Dublin, on lines suggested by the Irish Romanesque, and possesses features of unusual interest. We quote the following interesting description from "The Connaught Telegraph":—

The new church is built of Irish and of local materials, within and without, as far as possible, and where materials have been imported, it has been of necessity. The exterior has been built of the splendid local red granite—sandstone of everlasting quality—so hard that it was impossible to carve or dress it into the forms or details of the new style, and hence granite from the Dublin mountains, and limestone from Cork, were utilised for such wrought work as parapet copings, crosses, &c.

The parapet walls over the aisles are built of a chequer pattern, formed of red sandstone alternating with a cream coloured stone from near Balla. The chief feature of the outside of the church is the great square, massive tower, surmounted by a bold wrought iron gilded cross. It may be possible to quote Ruskin's opinion in the "Stones of Venice," on the subject of church towers. "No towers are so great as the square browed ones with massy cornices and rent battlements."

The Plan.—In plan, the church consists of nave, aisles, western tower, serving as narthex, and accommodating an ample organ gallery, opened to the nave by a lofty arch. Baptistery, chancel, two side chapels, sacristy, with confraternity room over.

The principal entrance to the church is through the great west doorway, a lofty portal, the design based upon the famous Irish Romanesque doorway of the ancient cathedral of Clonfert, the noblest doorway of any Irish church, or perhaps of any Romanesque church of the period in these countries.

The western doorway gives entrance to the tower, and thence to the nave. Each of the aisles, north and south, have large side porches.

The Chancel and Side Chapels.—The chancel is of exceptionally spacious area, in order to afford ample space for the dignified performance of time-honoured ritual and ceremony. The chancel is nearly 40 feet deep by 29 feet wide, and the side chapels are of correspondingly generous dimensions. The sacristy is a large and comfortable apartment, with spacious confraternity room over. The angle of the sacristy is finished with a turret of the form of the ancient round towers. The north, or Sacred Heart chapel, 34 feet deep by 14 feet wide, has a separate entrance, and will be made available as a "nuns' choir" until such time as the choir, temporarily omitted is added. The Lady chapel is of like dimensions.

The Planning of the Church.—The church has been planned on somewhat novel lines, or rather a reversion to ancient and mediæval principles. About forty-six years ago Mr. W. H. Goodyear, M.A., Director of the Brooklyn (U.S.A.) Museum of Arts and Science, after many tours throughout Europe and minute examination of ancient remains, began to cast about him for an explanation of why the simplest mediæval structures were so infinitely more satisfactory in appearance than the modern buildings. By a series of the most elaborate and painstaking observations, to which he has since devoted his life, he arrived at the conclusion that one reason was that modern buildings are built on lines of such rigid mathematical accuracy as to produce an artificial appearance of mechanical hardness, whereas the old buildings possessed a grace of outline largely derived from simple curves, bends and inclinations. Mr. Goodyear's conclusions were not entirely novel, but he was the first to demonstrate their almost universal application in old buildings. So far back as the re-building of old St. Paul's, London, in the reign of Charles II., it is recorded that two of the Commissioners, Chicheley and Pratt, appointed by the King in co-operation with the architect, Sir Christopher Wren, were of opinion that the pillars which were six inches out of the perpendicular had been built so for effect in the perspective, by the original architect. Early in the nineteenth century, Sir James Pennethorne, Penrose, and certain learned German scientists, discovered that the same rule applied to the ancient Greek temples. About 1868, Mr. George E. Street, R.A., the famous architect, called attention to the existence of intentional irregularities in certain Italian churches. More recently Mr. Arthur Hill, M.A., of Cork, found on investigation that the old church of St. John, Chester, possessed these intentional irregularities. Mr. Goodyear has clearly demonstrated that it is quite the exception to find any ancient or mediæval structures without them. In Ireland, St. Patrick's Cathedral and Christ Church Cathedral, Dublin, are cases in point, which had been investigated and fully demonstrated. His views have been pretty generally accepted in Italy and in France, and to a certain extent in England. There can be no doubt that these discoveries are of far-reaching importance in architecture, and their use has been applied in several of the most important recent churches in America, including the latest additions to New York Cathedral. Newport church is, however, probably the first modern church in Europe in which they have been practically applied. Mr. Goodyear states that it is certainly the first modern church in which what is known as the "widening refinement" has been used. The refinements are briefly as follows:—The nave of the church is one foot narrower at the eastern than at the western end; the side walls of the nave incline outwards six inches on either side; the floor of the church rises one foot towards the altar; exteriorly the tower walls, and all the piers, &c., are "battered" or inclined, and the result is to enhance the dimensions of the building.

MESSRS. STONE & CO., LTD., and Mr. James Fenwick (Secretary), of 11 Ironmonger Lane, E.C., were summoned last week at the Mansion House on charges of having failed to comply with the Building Bricks Order, 1918, in that they unlawfully sold to Mr. J. W. Sergeant 20,000 building bricks not in accordance with terms of permit issued by the Ministry of Munitions and contrary to the Regulations for the Defence of the Realm. Mr. J. W. Sergeant, of Clarence Wharf, Kingston-on-Thames, was summoned for aiding and abetting the offence. The summons against Mr. Fenwick, who stated he knew nothing of the transaction, was withdrawn. After evidence was heard the Alderman fined each defendant £50 with 15 guineas costs.

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Brugge-Zeehaven

A RETROSPECT AND A FORECAST.

The History of Zeebrugge in brief, from the Origin of the Movement for its Creation.

By JOHN A. RANDOLPH,

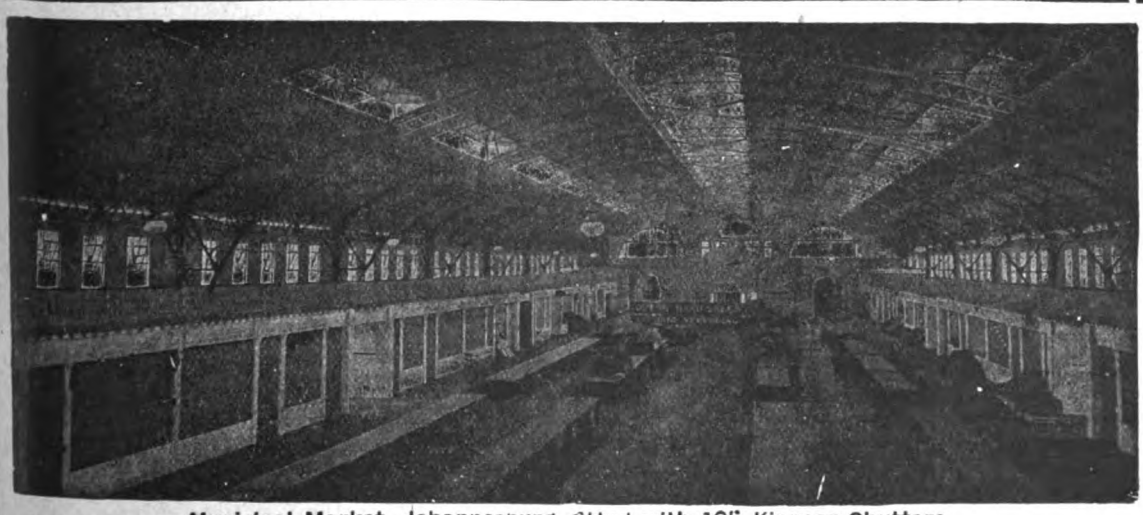
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VARIETIES.

WELL known in the building trade at Greenock, Mr. Henry Carson has died in his eightieth year.

THE housing scheme which the Bargoed authority have adopted is estimated to cost a sum of £750,000.

A NEW church, the Church of the Good Shepherd, is to be erected at Southchurch Beach, Southend-on-Sea.

AN old solid brass candelabra recently discovered has been reburnished and placed in the Town Hall at Higham Ferrers.

THE Aberystwyth Town Council have passed the plans for additions to 7 and 9 Penmaisglas Road. Mr. J. L. Evans, of Great Darkgate Street, is the architect.

THE surveyor to the Bentley Urban District Council, in a report to the Council, states that at least 300 new houses will be required at once on the cessation of hostilities.

TENDERS are being invited for the erection of a stone building 48 feet long, 28 feet wide, and 24 feet high for Killeedy Milling Society, Ltd., Killeedy, Ballagh, Ireland.

THE Hemsworth Rural Council are asking the Local Government Board to make the provision of baths in all new dwelling houses obligatory on all promoters of housing schemes.

SECOND-LIEUTENANT J. LISTER RODGER, M.C., of the K.O.Y.L.I., is in hospital in London wounded in the thigh. He is the eldest son of Mr. J. L. Rodger, contractor, Castleford.

THE residence of Colonel Stracey-Clitherow, Boston House, Brentford, which is reported to have been presented by Queen Elizabeth to the Earl of Leicester, is to be sold by auction shortly.

AN estate of about 100 acres has been purchased in Buckinghamshire with a view to laying it out as a model village to be known as Jordan's Village. The promoters of the scheme include Messrs. Fred & Douglas Rowntree.

THE Bridlington District Council have decided to initiate a housing scheme, to include the erection of forty-four cottages in various parts of the area coming under their control.

THE Wexford (Ireland) Trade Council has passed a resolution calling upon the Corporation to erect 300 cottages, each to contain three bedrooms, and with one-eighth of an acre of land.

THE Housing Association for Officers' Families has purchased six houses at Cheltenham, which they intend to convert into sixteen flats for provision for officers' widows and disabled officers.

A PERUVIAN, named Jose Alvarez Calderon, who said he was an architect employed at High Wycombe, was fined £10 by the borough magistrates on Friday for failing to notify his arrival in Eastbourne to the Registration Officer.

FOR the British Farmers' Red Cross funds the East Ward Committee, Peterborough, have fixed the date Saturday, September 28, for the draw for a piece of building land generously given by the executors of the late Mr. J. W. Dickens.

AT their last meeting the Urban Council of Ware, Hertfordshire, were informed by their surveyor that the form he had received from the Government on the question of after-war reconstruction contained over 500 questions to be replied to.

IT has been decided to erect six cottages for disabled soldiers at Hampton-on-Thames, as a memorial to the men of the district who have fallen in the war. Mr. J. Aldous, a resident in the district, has generously given the land required for the purpose.

OLD Poole Hall, one of the historical halls of England, situated on the bank of the Mersey, is doomed, as it is to be demolished for the purpose of erection of new dye-works. The house contains many historic relics, including a fine example of a pre-Reformation chapel.

THE Rhymney U.D.C. has decided to ask five architects to submit terms for providing all the work necessary for the presentation of a proposed housing scheme to the Local Government Board, such sum to be merged into the commission which may be due upon the contract.

As the Local Government Board has intimated that public utility housing schemes are not likely to meet with their approval, the Newport Corporation Housing Committee has decided to prepare plans for 1,000 houses subject to the estimated loss not exceeding 1d. in the £. The borough architect is to report on three specified sites.

AMONG the schemes to occupy the workmen of Lewis after the war there is included one for the construction of 100 miles of electric railway to be worked by water power from Loch Grimshader, a fresh-water lake five miles south-west of Stornoway. Lord Leverhulme counts upon the co-operation of the people of the island with their landlord.

AT the annual meeting held at Cardiff of the sanitary inspectors of South Wales and Monmouthshire, Mr. D. R. Thomas (Dewi Samlet) of Gowerton, was elected chairman for the ensuing year, and Mr. W. H. Orledge (Panteg), vice-chairman; Mr. J. Towy Thomas (Rhondda) was elected to represent South Wales on the General Council of the Association.

MR. SYDNEY G. BOUTWOOD, cinema proprietor, was fined £25 and 50 guineas costs for exceeding the amount of £500 in carrying out alterations and decorations to premises in George Street, Plymouth, to convert them from shops into a place of public entertainment, without having obtained a licence from the Ministry of Munitions.

A NUMBER of applications are reported as having been received by the Gelligaer Council (Glamorgan) for the appointment of architect and surveyor in connection with the housing scheme after the war. Mr. D. Hopkins, J.P., the chairman, stated that the scheme in view would involve an expenditure of nearly three-quarters of a million.

MR. WILLIAM HENRY JAMES BOOT, Vice-President of the Royal Society of British Artists from 1895 to 1914, died at his residence at Hampstead on Sunday evening last. Mr. Boot was born in Nottingham in 1848, and studied at the Derby School of Art. He was for many years art editor of the "Strand Magazine," and contributed many drawings to the art magazines and the illustrated papers.

THE formal opening took place on Saturday last of the fifth Carnegie Institute in Dunfermline. The Institute, which is in the Netherton district of the city, has cost over £13,000, comprising a central hall, suites of slipper baths for both sexes, reading room, children's room, billiard room, &c. The erection of the building was commenced in 1913, and the delay in the completion has been caused by the war.

HER MAJESTY THE QUEEN recently visited St. Mark's Court, St. John's Wood, to view the first block of flats provided for officers' widows and disabled officers, erected by the Housing Association for Officers' Families, and expressed her satisfaction with the arrangements. Both the King and Queen have subscribed £100 to the funds of the association. St. Mark's Court consists of twenty-four flats.

MESSRS. ALLAN JONES & CO., LTD., have been registered as a private company with a capital of £30,000 in £1 shares to take over the business of Allan Jones & Co., of Hatherley Works, Gloucester, dealers in and manufacturers of wooden and metal goods, steps, chairs, seats, tables, easels, erectors of hangars, &c. The registered offices are at 10 Fenchurch Buildings, London, E.C.

AN influential committee, of which the Bishop of Winchester is chairman, has been formed to appeal for funds to erect a memorial to the memory of the late Dr. Scott Holland. An amount of at least £5,000 is required to prepare for publication Dr. Scott Holland's unpublished writings, to complete the building of the Maurice Hostel at Hoxton, and to found a Holland Lecture in connection with the University of Oxford.

EXPERIMENTS are being conducted in Aberdeenshire with a view to the extraction of potash from granite. Potash is found in felspar, which is one of the constituents of granite. The proportion varies, some granites being richer than others. Under the auspices of the Geological Survey, rock from different parts of the country is being tested, with a view to seeing whether the yield of potash will warrant the setting up of works on a commercial scale to extract it.

AT Sheffield Building Trades' Exchange a conference was held last week of members of the Building Trades Employers' Association and National Federation of Building Trades Operatives. Some time ago the operatives made an application for an increase of wages, and this was the principal subject for consideration. The proceedings were more or less of an informal or preliminary character, and the whole question is to be fully considered before anything of a definite character is done.

A LOCAL GOVERNMENT BOARD inquiry has been held as to town planning and housing schemes on the southern boundaries of Leeds. As the local authority for the township of Oulton-with-Woodlesford, the Hunslet Rural District Council applied for permission to prepare a town-planning scheme, partly in that township and partly in the adjoining areas of Rothwell and Methley, the total area being about 800 acres, of which 620 acres were in Oulton-with-Woodlesford. The Hunslet Council contemplated the erection of 100 houses for the working classes, and were now negotiating for the necessary land. Objections were raised by the Rothwell and Methley Councils against the inclusion of their districts in the scheme.

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THE ARCHITECT
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Slaves of the Drawing-Board.

SLAVERY has existed for centuries in different parts of the world, but in most cases has been the result of the subjugation of man by man through the agency of conquest or other tragic vicissitudes. It has been the architect's lot, after attaining professional rank, to gradually become the slave of the instrument he uses to express his conceptions. The lot of a slave may be endurable, and even happy; it may, on the other hand, be the most tragic of all conditions produced by human agency. Let us consider the architect's training. He is gradually initiated into the use of T-square, set-square, and drawing board, and learns to understand the mystery of plan, elevation and section, and feels that a new world of delineation is discovered. He little knows that in many cases he has placed himself between the upper and nether millstone, and will spend his life in producing endless plans, elevations and sections until the day of his death. The students' competitions he enters mean the continual effort to produce scale drawings; the plotting and measuring of old buildings ends in the production of more drawings, broken less often now than in the past by infrequent periods of sketching. If after he commences practice on his own account he takes part in public competitions he has to make carefully finished scale drawings *ad nauseam;* and in each set of drawings to attain to a greater degree of finish. He endeavours to win the approbation of clients by carefully finished scale drawings, and it would probably be a surprise even to himself if he worked out the number of hours which he works for his virtual master—the drawing-board and its accessory instruments.

If he is energetic he finds he has little time for seeing his fellows, no time for taking part in the life around him, for he is completely enslaved, and will be so until he dies, whether he occupies an obscure position or whether the wheel of chance bears him to a high position in the Temple of Fame in the course of one of its revolutions.

We do not intend to argue that the architect should not learn to draw and to draw well, for it is obviously necessary that he should acquire the art of expressing himself on paper; but we contend that what is in reality but a means to an end becomes in too many cases the end in itself, and that this is largely responsible for the fact that architects as a rule are not as well understood by their fellows as their brothers in other professions—to their great loss. To a great extent this has been the result of the modern development of competitions in England. Before the war there were comparatively few public buildings of any size which were given directly to an architect, and most of them formed the subject of competitions on which an immense amount of labour was expended by the architectural profession. There have been countless instances of competitions for buildings costing a few thousands only, for which a hundred or more designs were obtained, each of them illustrated sufficiently to serve as working drawings, and on which labour was expended which would never have been necessary in the case of a direct commission. Assessors have rather encouraged than discouraged the practice, and it has been the custom to ask the poor architect to show on drainage lines, to project shadows, and to give details most, if not all, of which are completely unnecessary if the assessor only knew his business. Most of the greatest buildings of the world ever since the days of the Renaissance have been built from drawings which are mere crude diagrams when compared with those produced for purposes of a modern competition, but it is to these buildings rather than to those of to-day to which we turn for guidance in our work.

And unfortunately when we have produced the finest possible architectural drawing we have done what the public is hardly able to appreciate.

It is unfortunate that we no longer have in our midst the traditional knowledge and craftsmanship which in the time of Wren enabled the architect to dispense with elaborate drawings, but we need not make matters worse than they are by piling up our self-imposed labours. The student should learn to draw and to draw well, and much of the work produced by comparatively young students in our schools, and notably that of the Architectural Association, shows how soon this essential facility can be acquired. Having obtained it the young architect should more and more learn to work with his head, and resolutely use drawing as a means to an end, and not magnify it into an end in itself. Competitions are most valuable exercises, especially in the art of planning—the key note of architectural design—but they can seldom be relied on to form the backbone of a good architectural practice. More than this, if we are to have them in the period after the war we hope the architectural societies and their members will severely discourage the system for relatively unimportant buildings, for which a system of direct selection is infinitely better, but when competitions are held they should be reduced to the simplest elements. Bare sketch drawings to a small scale should be ample for an experienced assessor, for in something like 99 cases out of 100 a competition result is decided on plan which could be shown as a mere diagram.

The time saved by limiting the tyranny of the drawing-board will be better spent by the architect in devoting more time to acquiring knowledge of practical matters of the law relating to buildings, of materials and construction, and many other subjects. He will probably be the gainer if he gives some attention to the study of the literature of architecture, to buildings old and new, and last, but by no means least, to those subjects on which the world in which he lives is interested—the culture and understanding which the educated man should possess. We are often confronted with instances of men who can produce beautiful drawings, and sometimes magnificent designs, who are totally unfitted to hold their own in educated society, and are unintelligent and dull companions for their fellows. Such men, the true slaves of the drawing-board, are defenceless when they come into contact with men of the world on committees or in business. They explain their points badly, they have no insight into the motives which influence other men, and in some cases having obtained work as the result of a competition they are unable to make good their position afterwards.

We cannot be "all things to all men" if we have never studied them, nor can we expect others to instantly appreciate the points we have taken a lifetime to acquire some knowledge of. The war has made a deep breach in the course of the lives of all of us, both old and young, and to architects in particular it has given time for reflection; and it is much to be hoped that in the future we shall show that we have learnt what is absolutely necessary to us if architects are to be an honoured and useful part of the body politic, and not merely "slaves of the drawing-board."

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Notes and Comments.

Our Craftsmen.

WE mean to give from time to time in our columns notices of some of the craftsmen and craft organisations who carry out work of interest to the public and to architects. Many of them carry on businesses in out of the way places, and their work is shown in inconspicuous premises and little-known shops. An architect frequently has to get work of a special nature carried out, and is at a loss to know into whose hands he should place his commission, and the same applies to the public to an even greater extent. The result is that numbers of firms who do what can be termed at the best indifferent work receive plenty of orders, and the best work is disregarded. There is now hardly any branch of craft design and workmanship which has not its able exponent. Much of the best which is now produced would rival that of any age, and the sole reason that we see so little of it is due to the rush and hurry of modern life, which prevents our exploration of the byways of the world in which we live. As a rule the more a man loves his craft the more difficult it is for him to make it known, as the delight of creation is an absorbing pleasure which does not give him time for what is termed "salesmanship." If, therefore, our pages occasionally serve a useful purpose in drawing attention to the good work done in the crafts, we hold that a really useful purpose will have been served.

A Report on Housing by Private Enterprise.

We give in this issue the comprehensive and admirably reasoned report of the committee convened by the Surveyors' Institution to consider the facilities which would enable all forms of private enterprise to take an adequate part in the provision of housing after the war. The nature and extent of the facilities asked for are carefully and well defined, and are limited to the difference between the immediate post-war cost of building and the mean permanent level which will be attained when stable conditions are once more established, coupled with an allowance to cover the high rate of interest on borrowed capital which must obtain for a considerable period. It is also suggested that taxation on housing schemes should be arranged on a pre-war level, in order to encourage the provision of accommodation which is greatly required. Allusion is also made to the removal of the legislative mistakes which have hampered building in the years immediately preceding the outbreak of war, while attention is directed towards the proposals made by Mr. E. M. Gibbs, of Sheffield, which, we understand, have been definitely approved of by the National Federation of Building Trade Employers. We hope that this weighty and well-reasoned report will receive the attention which is its due in official circles, and that we may see the end of the apparent attempt to penalise those who have served the community well in the past. It must always be understood that this question affects not only those who are engaged in the building trades, but all of us, for if a great financial burden is incurred through State and municipal schemes, it becomes a dead weight on all other industries, and will reduce the value of the incomes of a great body of the population, while it will also have an indirect and disadvantageous influence on the workers' wages, since it will diminish the funds out of the proceeds of which those wages are paid.

Variations in Housing Schemes.

The corners of our newspapers are now filled with reports of housing schemes in every section of the country, but we could wish that more thought were given to different variations of type. It seems hardly sufficient to say for example that the open fire is so rooted in the popular favour that no other type of heating will be considered. Nor does it seem wise to refuse to entertain the possibility of communal cooking arrangements and the great simplifications they might entail. The kitchen and its adjuncts, whether carried out on a large or small scale, contributes a big item of the cost of any house, the space it occupies is considerable and the labour entailed in cooking without adequate apparatus is great, while the cost of adequate apparatus puts their adoption out of the question in any but large houses. Naturally when the problem is one of rural housing, all that is done must be done within the four walls of a cottage, but wherever dwellings are grouped together simplification and combination become possible if we are not to take the Englishman's wish to retain his savage isolation as a determining factor. We should much like to see the result of a competition two terms of which were simply that so many families of a given size were to be accommodated on a site, and competitors asked to show how service and labour could best be eliminated without making an absolute fetish of the time-honoured prejudices in favour of isolation. We know at least that hot water might be provided to a group of houses, and that given cheap electrical power or other means of obtaining heat, fireplaces, coal cellars, and dustbins might all of them be eliminated. Possibly the women who return from doing well-paid war work to domestic occupations may have the edge of their conservatism blunted.

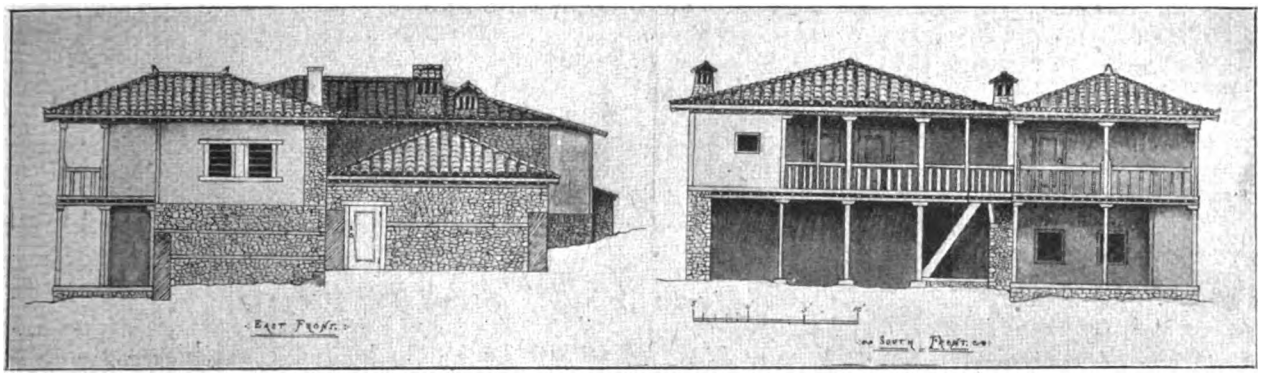
> *"In law what plea so tainted and corrupt,*
> *But being seasoned by a gracious voice*
> *Obscures the show of evil?"*

Captain Rice delivered an address on housing at a meeting of the Rotary Club last Wednesday, in which he made a very skilful use of many platitudes, neatly eluding the real difficulties of the problem, his address being a perfect specimen of skilful political oratory. The speaker spoke of the bravery and patriotism of our soldiers, and told his audience it would be a shame if they returned to any but the most perfect of dwellings, even if they intended to emigrate and would not permanently require them. He brushed aside the possibility that private enterprise might do anything to meet the shortage with a few well-turned sentences calculated to convince any one unacquainted with the subject which he was playing with like a juggler. We are told that Captain Rice's occupation largely consists of making speeches on the housing question, and we can quite understand his value to those who are trying to force the pace, for his address was like a masterpiece of stage scenery well calculated to impress the ignorant, and we thoroughly enjoyed listening to him, while he ingeniously played with loaded dice. All the same, we left feeling we should have the time of our lives if we could have stayed to hear the speaker cross-examined by anyone who knew his subject. We imagine Captain Rice would probably have pleaded that he must leave to keep a pressing appointment.

Business as Usual during Reconstruction.

The above sentence expresses in stock commercial phraseology our position. We have been thinking out many points which it seems to us should be covered by a paper devoted to the architectural profession and the building crafts, but the exact form and method which should be employed, and the determination of the relative importance of the matter which we should like to give will take a considerable time to settle. Not that we think any "final settlement" can ever be arrived at in a world the conditions of which are now in the melting pot, and even after conditions have become stabilised they will go on changing, necessitating fresh developments on the part of those who wish to keep abreast of the time. Still we hope in the next few months to be able to arrive at a *modus operandi* which will be suitable and provide a paper which will meet new wants. Meanwhile, we wish our readers to understand that if we omit what obviously should be included, it is not because we are oblivious of the facts, but because in our effort to deal with a number of pressing matters, some must be postponed for a time. We may add that we are considering the treatment of several subjects of importance to the building trade and allied interests, but we propose to postpone a statement of our plans until they are definitely determined.

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A MACEDONIAN HOUSE.—EAST AND SOUTH FRONTS.

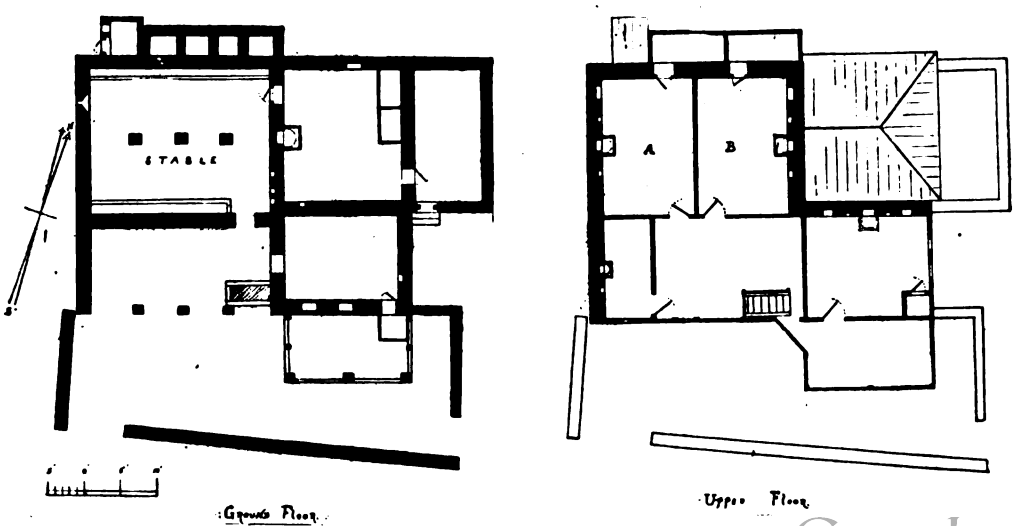
THE MACEDONIAN HOUSE.

By Colonel E. MALIN-WHITE.

THE old Turkish houses, situated among the hills of Macedonia, are perhaps more interesting from an antiquarian point of view than an architectural one. Nevertheless, their frank simplicity and bold, primitive construction cannot fail to attract all who are interested in the development of one of the most ancient arts, building. The crude rough workmanship is quite a relief, after the perfect regularity of every brick and beam in so many modern English houses. These quaint little dwellings all look as though they belonged to a generation that is past and has seen better days. Like our old grand monastic ruins, a strange mediæval atmosphere, charged with romance and mystery, seems to envelope these deserted villages, hidden away among the hills. Like them also, the houses are the work of more than one builder. Traces of closed-up doorways and windows are evident in many of them. Some have at different times had rooms added, often built on to the original house without the slightest attempt being made to make the new walls combine with the old, the space between being merely plastered up with mud; while others have the ruined remains of old rooms, long fallen into disuse, still clinging to them.

Every man built his own house according to his ability and means. The main walls are usually about two feet thick and composed of rough stones, cemented with a liberal supply of mud. Mortar is very seldom used, owing to expense and the difficulties of transport. There are no foundations, the walls rising straight off the ground, which in most cases is rock. An attempt at levelling the surface is generally made first, but in many cases even this preparation is omitted. Up the wall, at intervals of three or four feet, stout oak beams are built into the face along its entire length on both sides. This gives extra stability and prevents cracks. In the upper part of the buildings the light partition walls are constructed of very stout basket work, thickly covered with plaster. This plaster is composed of clay and water mixed with straw or dried grass to make it bind. When dry it sets extremely hard and is very durable. The beams, rafters, and supports are all of oak, very roughly hewn, no attempt whatever being made to make them of uniform thickness or shape. The floors are made like the partition walls, of stout basket work. This is supported beneath by strong beams, and on top is plastered over with mud to a depth of from two to three inches. This type of flooring has several advantages. It is cheap, easily constructed, and prevents the unpleasant odours from the stable passing up into the living rooms above.

The villages whenever possible are placed on the southern slopes of the hills. The houses themselves face south or south-east. They are all so much alike that to describe one is to describe all. They differ slightly, but only in minor details. I have selected a house, therefore, embodying all the usual features, and at the same time one or two additional ones which are not so general. It stands by itself, about 100 yards above the old mosque, overlooking the village. In front three thick walls, about 7 feet high, form a small enclosure or courtyard. The stable, which in all Macedonian houses occupies the ground floor, is entered by an opening in the south wall at the eastern end of the verandah. Immediately inside, built into the thickness of the wall on the right, are three small niches. These are also a characteristic feature of Macedonian dwellings, there being no fewer than seventeen in this one house. The larger ones are lined with wood and provided with shelves and doors. They make very cool cupboards during the hot weather. A low stone manger runs along the entire length of the stable, both north and south walls. Down the centre three stout wooden columns resting on large stone slabs support the floor above. It is very dark inside, the door and a small splayed opening in the west wall being the only means of admitting light and air. In the north-east



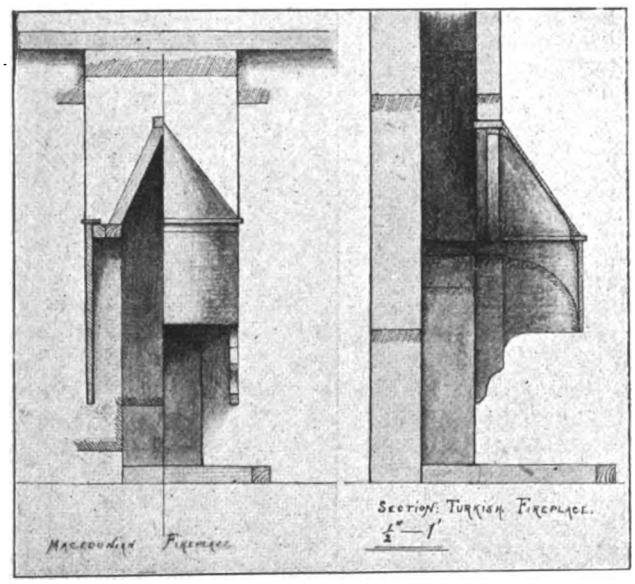
A MACEDONIAN HOUSE.—GROUND AND UPPER FLOORS.

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corner is a small door about 4 feet high, which leads into a square room, probably used as a kitchen. The floor level is about 2 feet above that of the stable. As the door is very low, it would be somewhat difficult for any stray mule or donkey to get through, should it at any time be left open. The large cupboard built against the east wall, and used for storing potatoes, is also interesting. It consists of two compartments. These are open at the top, which is the only means of entering them. The sides are 5½ feet high, and made of basket work plastered over with mud. On the floor level, each has a small opening, provided with a sliding shutter. The compartments are filled from the top, and as the potatoes are required for use, they are taken out through the small opening at the bottom.

On the right of this cupboard a door opens into a small enclosed yard. Distinct traces remain to show that at some time it was roofed. The room to the east of the verandah has no fireplace, and was probably used as a grain and forage store. In one corner a large cupboard projects on to the verandah in front.

By the entrance to this room is a ladder, which is the only means of gaining the upper storey. It leads on to the main verandah above. This originally extended across the entire front of the two living rooms. At a later date, however, the western end was partitioned off, as shown, to form a small room.



A MACEDONIAN HOUSE.—TYPE OF FIREPLACE.

It is interesting to note the thick outer wall, which protects like a shell the whole of the interior from the north and west winds. The partition walls are formed in the usual manner of stout basket work and mud plaster. Note the number of niches and small cupboards built in the thickness of the main wall. The two rooms A and B have no windows. Light is admitted in each case through a small opening in the roof. This is made by propping up the lower ends of two or three tiles a few inches. In the north wall of each room a small door opens into a long, built-out cupboard. The sides of these cupboards are similar to the internal partition walls, but their bases, shown in the plan of the ground floor, are constructed of stone.

The room to the east of the main verandah is quite superior to the rest of the building, and boasts a plaster ceiling, two windows, four niches, two each side of the fireplace, and a cupboard in the south-east corner. These cupboards are another characteristic of every Turkish living room. I am informed that this house would be capable of accommodating at least three families, one living room for each serving all purposes. Also that the inhabitants do not use beds, but sleep on the floor. During the day they roll up their blankets, &c., and stow them away out of sight in these strange cupboards. The fireplaces, too, are quite a distinct feature. They consist of a raised hearth above which projects a large canopy, usually semi-circular, which draws the smoke up the recessed shaft leading to the chimney.

In front of this room is a separate verandah. It communicates with the main one by means of a platform built across the angle between them. The lavatory is in rear of the house by the north-west angle. It has no drainage system whatsoever. A small opening through the wall at the bottom acts as an outlet, there being not even a small pit dug.

Every house is full of interesting little details, but it is impossible here to do more than give a rough idea of the general style. The chief feature that impresses itself upon one's mind, apart from the crude, rough and ready workmanship, is the remarkable appropriateness of every detail in the construction. Everything is done for a definite purpose. The result, whether it is for protection against the extremes of climate or merely for general convenience, is invariably most effective. I think one may safely assert without fear of contradiction that the Macedonian has, in his own way, thoroughly mastered the art of making himself comfortable.

ST. MIHIEL.

By JOHN A. RANDOLPH.

THE events on the Western battle-front have brought the public eye at last on to the St. Mihiel salient, and probably for the time being attention will be riveted to that spot, while the continued, but now slower, progress between Arras and St. Quentin persists almost unnoticed over here except by the Press telegrams and correspondents, for the possibilities of the situation are full of ominous portent for the enemy, the distance between St. Mihiel and Trèves being practically insignificant.

In St. Mihiel, in pre-war times, there was much of architectural interest.

The church of the Abbey, dedicated, of course, to St. Michael (we will take things as in the pre-war period) is of the seventeenth century, with three towers. It has a Romanesque door and other portions of that time in the western tower, and the organ and carved stalls belong to the eighteenth. At the entrance to the sacristy is a considerable portion of a stone sixteenth century screen and organ loft, and the church possesses some sculpture by Ligier Richier, both in stone and in wood.

The fine blocks of the seventeenth century Abbey are devoted to law courts, justice of the peace, prison, gendarmery, college and library, and so forth.

There is an earlier church, dedicated to St. Stephen, of far greater antiquity and interest, dating from the thirteenth century, and containing portions of the fifteenth, sixteenth, and eighteenth, with an exquisitely carved Entombment by Richier, and a reredos of temp. François I.

In the town are a number of fine Renaissance houses, a manor house, and a town hall of the eighteenth century.

The bridge over the Meuse dates partly from the fifteenth century.

Nature too has her share in the attractions of this place, with curious masses of cliff close to the river bank, on one portion of which are a chapel and a large stone and a menhir. The stone, possibly owing to the name of the town, is locally known as the Devil's Table.

In what condition the enemy will have left it one can but surmise, even if they have not had time to vent their spite on the town before the American troops made such short work of the stronghold and of the Huns who had held the salient at their mercy since September 26, 1914.

THE death has occurred of Bailie Stephen Nair at his residence, Brewlands House, Dalkeith. For over forty years he conducted an extensive building business, and carried through important undertakings in the Lothians and the South of Scotland, including the erection of various mansion houses.

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HOUSING BY PRIVATE ENTERPRISE.

REPORT OF THE HOUSING CONFERENCE, CONVENED BY THE SURVEYORS' INSTITUTION TO DETERMINE WHAT FACILITIES WOULD BE REQUIRED TO ENABLE ALL FORMS OF PRIVATE ENTERPRISE TO TAKE AN ADEQUATE PART IN MAKING GOOD THE SHORTAGE OF WORKING-CLASS DWELLINGS AFTER THE WAR.

July, 1918.

1. In their Reports on Housing issued during 1916 and 1917 the Surveyors' Institution referred to the urgent necessity of securing the co-operation of every form of private enterprise if the admitted shortage of working-class dwellings was expeditiously and adequately to be met, and submitted proposals which it was thought would have the effect of inducing private builders and other agencies again to devote their energies to this class of undertaking. Reports having a similar object were also drawn up by professional and trade societies and others, including the Auctioneers and Estate Agents' Institute, the Building Societies' Association, the National Federation of House Builders, and the Committee of the National Conference on Housing after the War, and the recommendations made have been laid before the Local Government Board by deputation and other means.

2. In a circular dated March 18, 1918, the President of the Local Government Board and the Secretary for Scotland made a definite offer to local authorities in Great Britain, prepared to undertake the erection of working-class houses, to the effect that the State would share to the extent of 75 per cent. in any loss of income for a period of seven years, or to a similar extent in any depreciation in the value of the property at the end of that period, which might be due to the fact that the cost of building immediately after the war was likely to be considerably in excess of that which might be anticipated when things had settled down to after-war conditions.

3. It was obvious that even if such an offer were extended to public utility societies or private individuals it could not be effective, in that they would be bound to view such an undertaking from a business standpoint; although the co-operation of such agencies is of the utmost importance in view of the fact that, given equal facilities, and owing to their being able to buy in the open market without being tied down by exact specifications, and to their possessing the necessary plant and organisation, they might be expected for the same outlay to provide a larger number of approved houses than local authorities.

4. The Surveyors' Institution, therefore, determined to focus the view of the bodies mainly interested in insuring the support of private enterprise in meeting this national need by means of a Conference, in which the following took part:—

The Auctioneers and Estate Agents' Institute	3,000	members
The Building Societies' Association	209	societies*
The Federation of British Industries ...	846	members
The Garden Cities and Town Planning Association	80	societies
The Land Agents' Society	1,332	members
The Committee of the National Conference on Housing after the War	100	,,
The National Federation of Building Trade Employers	6,000	,,
The National Federation of House Builders	400	,,
The National Federation of Property-owners and Ratepayers	13,750†	,,
The Royal Institute of British Architects ...	4,336	,,
The Surveyors' Institution	5,000	,,

* These societies represent a membership of 382 577, mortgage assets £40,847,390, and other investments £6,017,626.

† There are sixty-nine affiliated associations.

5. The Conference have not thought it requisite to enlarge upon the necessity of securing the co-operation of private enterprise in the work of housing, the requirements of the country both in making up leeway and in meeting the annual needs of a growing population being likely to tax to the full the energies of every form of housing effort. Even those who favour an extension of the activities of local bodies in this direction have hardly ventured to suggest that the stupendous work of providing the whole of the dwellings necessary to house the working classes could satisfactorily be undertaken through their agency; and the opinion is generally accepted that an effort should be made to induce those who in the past have been mainly instrumental in carrying out this work, to assist in meeting both the present emergency and the needs of the future.

6. The Conference unanimously agreed that under existing conditions no form of private enterprise could take its part in building working-class houses unless adequate financial assistance were made available. They then proceeded to consider the form or forms of financial assistance which would be required (1) to meet the anticipated difference in the cost of houses built at a time of exceptionally high prices and the subsequent estimated cost of the same houses on things settling down to post-war conditions, hereafter referred to as "the extra war cost," and (2) to provide the capital ordinarily required for and during building operations.

7. Dealing first with (1) the Conference are of opinion that the problem could best be dealt with by—

(*a*) A grant from national funds made to all agencies which erect houses according to approved schemes during the transition period;

(*b*) Such grant should represent the extra war cost as defined in paragraph 6;

(*c*) The grant should take the form of a percentage to be applied to the actual ascertained cost of houses erected in accordance with approved schemes;

(*d*) The percentage should be calculated according to the relation between the estimated extra war cost defined in paragraph 6 and the estimated average cost of erection of the houses of the character approved;

(*e*) The percentage should be adjusted periodically for new schemes to meet the changing conditions during the transition period.

Such a scheme would have the advantage of simplicity in procedure, and, by enabling the agency responsible for building to know beforehand the extent of the assistance to be received, would permit the usual course of business by sale or otherwise to be followed.

8. In considering proposals made with the object of meeting the anticipated loss on building during the transition period, the Government should, in the opinion of the Conference, approach the problem mainly from the standpoint of national requirements. The Conference recognise that there exists a very proper determination on the part of Parliament not to permit the use of public funds for the furtherance of merely private profit, as was expressed in the speech of the President of the Local Government Board in the House of Commons on May 2; but they would urge that the proposal made in the preceding paragraph could not properly be condemned on the plea that the builders' expenses, which would have to be taken into consideration in calculating the cost of the houses, would include remuneration for his own energies, since the latter must necessarily be allowed in order to place him on an equality with a contractor building for a local authority. The Parliamentary difficulty referred to above would seem to disappear if it is remembered that it is the precedent of the Corn Production Act and the controlled establishment which is followed, and the producer guaranteed in this case, not a profit, but merely against loss in his endeavour to supply a national need.

9. Should, however, it unfortunately prove impracticable to overcome the Parliamentary difficulty in the way of a definite financial grant, the Conference are of opinion that the minimum State assistance necessary to attract private enterprise must make good any loss of income during the transition period on the basis of the market rate of money for the time being and loss of capital at the end of that period. As already stated, an offer to meet merely a proportion of such loss could not secure the co-operation of agencies bound to view the undertaking from a business standpoint. Loss of income would be calculated by comparing the net return in the shape of rent with the interest at the borrowing rate on the ascertained cost of the house, and should be met by a grant sufficient to meet the estimated annual deficit. In estimating capital loss the ascertained cost of the house

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or houses, which should be based upon the fair and usual cost of building similar houses under contract, should be measured against their value, as between a willing buyer and a willing seller, at the time the valuation was made.

10. In order to remove the obstacle to dealings in the newly erected houses which would be caused were it impossible to gauge the probable loss until the end of the transition period, it is suggested that the value officially placed upon any property included in an authorised scheme should be ascertainable by intending sellers at any time during that period. In the event of a purchaser being found, the figure at which the sale would take place should be approved by the Government authority, for which purpose the services of the special Housing Committees referred to in paragraph 16 might be called into requisition; and on the completion of the purchase any capital loss, calculated in the manner indicated above, should be paid and the property be withdrawn from the scheme.

11. When estimating the amount of the loss which might have to be met by the State under such a scheme it should not be overlooked that after-war rents of existing houses must be subject to a considerable rise. Even if the continuance of some restriction on rents is found to be necessary, which the Conference hope may not prove to be the case, a considerable rise must still be contemplated, which would exercise an effect on the value of newly erected houses, the rental value of which would be in excess of that commanded by existing and less up-to-date buildings. This fact would operate to reduce the loss to be made good by the State.

12. The Conference are of opinion that, in the event of the prolongation in any form of the existing restriction on rents proving to be necessary, the loss might be further minimised, and admit of lower rents being charged, if the pre-war standard of assessment for both imperial and local taxation were retained in respect of all houses not exceeding the following rateable values, £22 in the London area, £20 in Greater London, £14 in other urban districts, and £8 in rural districts, and that comparable houses to be erected should be assessed on the same basis. They contend that this concession might properly be made during the transition period in that the higher rents which would have to be charged, and on which assessments would in ordinary course be based, might reasonably be looked upon as attributable to the abnormal conditions which had largely increased the cost of new houses and the maintenance and other charges in connection with existing houses. At the end of that period the level of rents would have settled down to post-war conditions, and new assessments based thereon might properly be made. Such a proposal would throw no unfair burden upon localities as no additional services would have to be provided owing to the fact that rents had had to be temporarily increased to meet exceptional circumstances.

13. Turning now to (2), referred to in paragraph 6, dealing with the capital ordinarily required for carrying out the actual building operations, it seems obvious to the Conference that, in view of the shortage of capital which must be anticipated after the war and the great demands which will be made upon it, adequate arrangements must be made to enable the various forms of private enterprise to obtain the capital necessary to carry out their undertakings. It is true that if private enterprise is encouraged, and not put into unfair competition with public bodies, some part of the money required may be raised privately as hitherto, but in the opinion of the Conference the greater portion will have to be provided from public funds, and in a manner which will enable those desirous of carrying through approved schemes to do so expeditiously and without unnecessary formalities. For this purpose either special departments of existing banks or a Housing Bank, constituted by the Local Government Board under Treasury authority, would be likely to prove more effective, as being more directly in touch with the objects for which the capital was needed, than the ordinary sources through which advances of public funds are usually made. The closest co-operation between the bank and the building societies would be desirable. The latter are in close touch with the financing of houses for personal occupation; they are specially interested in the success of the ventures for which they provide assistance; and their working expenses compared with turnover are exceptionally low. In the past their transactions have been mainly with the small builder or purchaser, but if adequate funds were made available the already existing organisation of these societies might quickly be extended to cover larger operations.

14. The advances for building operations should be made on reducible mortgages spread over fifty years, and on sale of a house or houses the proportionate outstanding balance of the mortgage should be transferable to the purchaser on conditions sufficient to safeguard the State from loss. Eighty per cent. of the cost of buildings, roads, sewers, and sites should be obtainable, the advances being made in instalments on the certificate of a qualified surveyor nominated, if desired, by the Local Government Board, at the rate of 66 per cent. of the cost of the work as it proceeds, with the balance on completion. Additional advances should be allowed in approved cases.

15. With regard to the proposal which has been made that houses should be limited to twelve per acre, the Conference would point out that in certain cases land in process of development under schemes approved by local authorities has already been set out to allow of a greater number of houses per acre than that proposed, and that any change in such circumstances would be impracticable. Instances will also occur where the need for accommodation is great, and only small and isolated blocks of land are available. In such cases, assuming that a sufficient provision of open spaces to meet the requirements of the district has been made, a considerably larger number of houses per acre should be sanctioned, and still enable sanitary and pleasant conditions to obtain. The Conference are, therefore, of opinion that it would be unadvisable to lay down any general rule as to the number of houses to be allowed per acre, and would urge that each scheme should be considered in the light of the surrounding circumstances.

16. Full advantage should be taken of local knowledge in considering and authorising schemes, and this might probably best be done by setting up special Housing Committees, composed partly of elected and partly of co-opted members, possessing special knowledge and experience of the subject and acquainted with the needs and requirements of the district, so as to permit the Local Government Board to decentralise the work in connection with these housing schemes so far as possible.

17. The provision of cottages on rural estates offers a problem somewhat different from that met with in urban districts. On agricultural estates the cottages have usually been built by the landowners, who have looked upon them rather as part of the equipment of the estate than as an investment from which a direct return should be expected. During the last thirty or forty years, owing to changes in agricultural methods, there has in some localities been less demand for cottages for occupation by farm labourers, with the result that some have been allowed to fall into disrepair, while others have been taken by persons not directly employed on the estates. With the return to arable cultivation, which is already in progress and is likely to be expedited in the future, more labour will be employed on the land and more cottages will be needed to house it. To meet such cases the Conference recommend the procedure set out in the following paragraph.

18. Where a shortage of houses for the needs of the parish or district is certified by the Board of Agriculture to exist, the owners of estates should, in the first instance, be given the option of themselves supplying the deficiency. Should they desire to exercise that option, they should be placed with regard to financial assistance, &c., upon an equality with local authorities or other agencies providing houses under approved schemes, the Board of Agriculture being in that case the sanctioning authority, and being given power to lay down conditions as to plans, water

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supply, garden ground, &c. If, on the other hand, landowners prefer not themselves to erect houses, the necessary sites should be obtainable by the local authority or other agency, which undertakes the duty at the market price of the land, if necessary under compulsory powers. Should the shortage be found to be due to the housing provision for the ordinary requirements of the district being taken up by employees of the Government, local authorities, or statutory companies, those bodies should be required to supply sufficient accommodation for their own needs in the event of landowners not exercising their option to build.

19. While the question of finance is the most important touching the problem under consideration, there are several other matters which may here be referred to as exercising a considerable influence thereon, viz.:—

(*a*) By-laws;

(*b*) Part I. of the Finance (1909-10) Act, 1910;

(*c*) The Increase of Rent and Mortgage Interest (War Restrictions) Act, 1915.

(*d*) Building materials and standardisation.

(*a*) Local authorities, on the recommendation of the proposed Housing Committee (see paragraph 12) and with the sanction of the Local Government Board, should be encouraged to amend or remit any local by-laws dealing with the construction of houses or streets which appear unduly to hamper housing schemes, or to check the use of new, improved or cheaper methods of construction. It is hoped that the reports of the Departmental Committees dealing with these matters may contain recommendations which will assist the objects in view.

(*b*) Part I. of the Finance (1909-10) Act, 1910, has from the first exercised a prejudicial effect on housing owing not only to the amount of the tax imposed upon the industry, but also to the feeling of insecurity and alarm aroused by a measure which its supporters threatened to be merely the forerunner of still more advanced legislation. Whether there was good ground or not for these fears is entirely beside the mark since the atmosphere of uncertainty was in fact created, causing investors and capitalists to fight shy of house property as an investment and influencing mortgagees to review their security and, in many instances, to revise their terms. Building operations of this kind are largely carried on by means of borrowed capital, with the result that grave inconvenience was caused to the borrowers, while later the holding back of financial help imposed a powerful check upon this type of building operations. The Conference have endeavoured to view this question from an entirely impartial standpoint, and have arrived at the conclusion that the removal of the provisions dealing with increment value duty, reversion duty, and undeveloped land from Part I. of the 1910 Act is necessary if capital and individual energy are again to be attracted to the erection of working-class dwellings as an investment.

(*c*) The Increase of Rent and Mortgage Interest (War Restrictions) Act has been referred to in the earlier portion of this Memorandum in connection with the rise in rents which has been made inevitable by the increase in the cost of upkeep and the rate of interest on capital. It is difficult at present to foresee the conditions likely to prevail at the end of the war with sufficient certainty to enable a reliable opinion to be formed as to whether a return to complete freedom of contract, which, in ordinary circumstances, would generally be welcomed, may be expedient, but it is obvious, at any rate, that an amendment of the Act, permitting rents and mortgage interest to be raised, will be necessary. It has been suggested that if the complete removal of all restrictions does not prove practicable immediately after the war, the 1915 Act should be amended to permit an increase in rents and mortgage interest by a percentage sufficient to meet the average increase in cost of maintenance and other charges since the standard rents came into operation.

(*d*) In the event of any preference in respect of building materials proving necessary after the war, it would be essential that all forms of private enterprise should be placed in a position of equality with public bodies as regards price, distribution, and priority of delivery. A Departmental Committee of the Ministry of Reconstruction is at present investigating (1) the conditions prevailing throughout the country as regards the stocks and production of all descriptions of building materials, and (2) the probable demand for all classes of material during the transition period after the cessation of hostilities. It is hoped that their inquiry may prove of value in suggesting not only new sources for the supply of those materials already in general use, but new materials and new methods of construction which may tend to cheapen building. Standardisation of parts, too, may do something to lessen cost, while the free use of local materials and methods, which may often be employed with great advantage, should be encouraged.

20. The Conference have confined their attention to discussing the inducements, financial and otherwise, which might be expected to encourage private enterprise again to take its part in providing houses for the working classes. To indicate the sources from which the State might procure the funds required to supply the necessary financial assistance might be looked upon as outside their sphere, but they would suggest that when that subject comes under discussion the schemes advocated by Mr. E. M. Gibbs, F.R.I.B.A., and others, are worthy of consideration.

THE KING'S FUND FOR DISABLED OFFICERS AND MEN OF THE NAVY, ARMY AND AIR FORCE.

THE letter we give below has been sent to all members of the National Federation of Building Trade Employers. We are informed that it has not been sent to any architects or surveyors in order not to clash with any similar appeal made by those professions. It is unnecessary to say that such an appeal commands our sympathy and support.

C/o National Federation of Building Trades Employers of Great Britain and Ireland,
48 Bedford Square, London, W.C. 1.
September, 1918.

Dear Sir,—You will doubtless have read in the Press of the scheme the Minister of Pensions has recently launched, and of the appeal he has made on behalf of our disabled officers and men of the Navy, Army and Air Force, and how thoroughly he has thrown himself into the whole matter. In his scheme it is noticeable how prominent the Building Trade is, as being a very suitable form of employment in one way or another for large numbers of our wounded and partially disabled heroes, and, in supporting the Minister in that part of his scheme which offers instruction to suitable men to learn a trade by which they may earn a livelihood, I am appealing to the employers in our great industry to make a donation towards the Minister's scheme, *to be ear-marked for men who take up any part of the Building Trade as the means of providing for themselves and their dependents.*

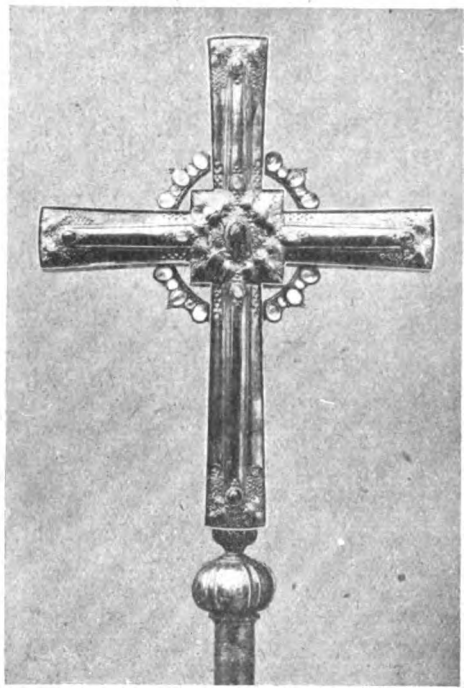
I have consulted with the Minister, who cordially approves my action, and I feel that, by making a successful appeal to members of the Building Industry throughout the country, I shall be more than repaid for the time I have voluntarily devoted during the war to the interests of the great Federation of which I have the honour of being a past-President.

The King and Queen have made a handsome donation of £53,000, being the City of London silver-wedding present, to which His Majesty has added a personal donation of £25,000; this not only shows the King's sympathetic interest, but he has graciously consented to the Fund being known as "The King's Fund for Disabled Officers and Men of the Navy, Army and Air Force."

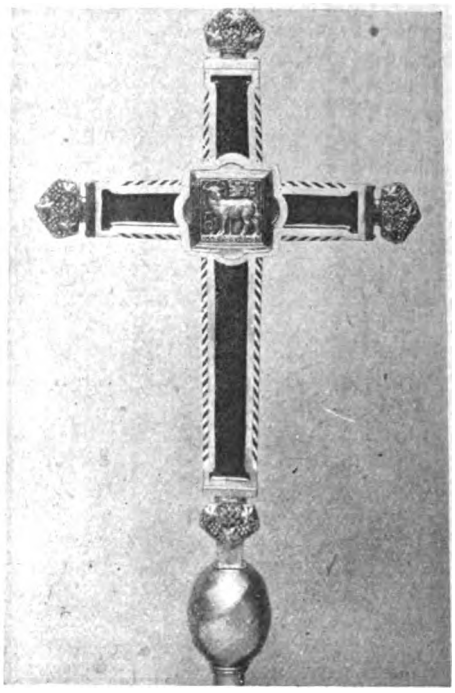
I shall feel grateful if you will, either personally or through your firm, subscribe as liberally as the many other calls upon you allow, and help me to send to the Minister of Pensions such a sum as will place the Building Trades Employers in the forefront of his list of subscribers. With compliments, I am, yours faithfully,

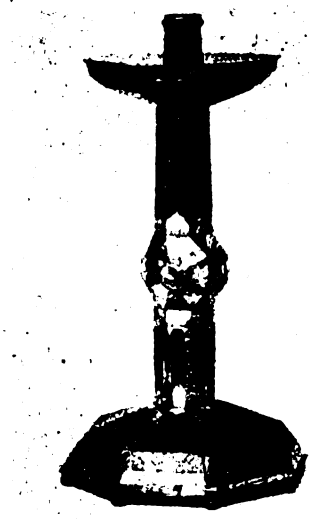
ERNEST J. BROWN.

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MODERN CRAFT WORKERS.—NO. 1.—THE ARTIFICERS' GUILD, 4 CONDUIT STREET, W.

THE illustrations we give are of crosses, chalices, and candlesticks which have been made by the Guild, but they also undertake every class of metal work from large gates to small articles for domestic use and jewellery.

The Artificers' Guild, now in its twentieth year of activity, was founded as an experiment in practical workshop reconstruction, and to cope (on a small scale) with the need, then very imperfectly supplied, for metal work both simple and well made.

As an experiment the idea of its founders was, first, to revive the sound workshop methods of a healthier age; and, second, to discover in what manner the labour-saving inventions of an industrial generation might be safely applied in the pursuit of a decent standard of work and living.

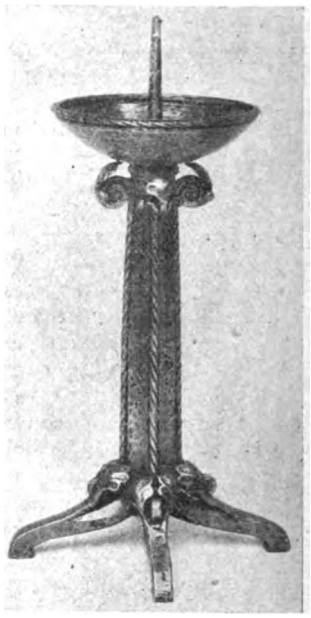
It was from the first considered as of importance that there should be this two-fold aim: that the worker should be kept in view no less than the work, so that expedients promising a cheaper or speedier or larger output at the expense of craftsmanlike sleight and dexterity—to the detriment, that is to say, of the educational process—were rigidly excluded from the Guild workshops.

The idea then being as much to make good craftsmen as to produce fine craftwork, it has always been the practice of the Guild to encourage any of its workers who might have achieved the necessary degree of all-round competence in any branch or branches of its activity to set up for themselves in their own small, self-contained workshops, and to support them in their enterprise with a sufficiency of orders and inquiries.

Since the last days of the nineteenth century the Guild's activities, at first confined to silver work, jewellery, sheet-metal, and wrought-iron work, have been gradually enlarged in their scope by the co-operation of workers in other allied handicrafts, until to-day there is practically no department in art or handicraft of the architectural series, from tapestry to toy-making and from stained-glass work to stone-cutting, that has not its competent representative among those exhibiting at or making use of the Conduit Street show-room.

Latterly the activity of this group of workers has taken direction from the sad necessities of these momentous days, and in particular the training of convalescent and discharged Service men in jewellery and light metal work has provided a greatly valued opportunity for some of us to help towards a cheerful and speedy competence men who have deserved so well of their country.

Of such work the Guild hope next month to hold a small exhibition as a demonstration of what can be done in a short time, and under unfavourable circumstances, to fit men so handicapped for confronting life in their own country.





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Monthly Review of the Building Industry and its Crafts.

How the Building Industry is Organised.

THE coming of National Joint Industrial Councils and their formal recognition as the official standing Consultative Committees to the Government on all questions affecting the industries they respectively represent, and as the normal channel through which the opinions and experiences of each industry will be sought on all questions with which such industry is concerned, marks a new and important phase in the evolution of associated effort as applied to the purposes of industrial organisation. When the mediæval guild system fell into desuetude a period of stagnation seems to have ensued, so far as the organisation of industry is concerned, but with the rise of the modern industrial system coincident with the more extended and intensive application of machinery and factory methods to purposes of production, it soon became evident to those who had only the labour of their heads and hands to sell that they must combine for the purposes of collective bargaining as to wages and conditions, and the formation of local trades unions was the result.

So far as the modern period is concerned, therefore, at the beginning of the scale of industrial organisation we have the local unions of artisan workers belonging to the respective handicrafts; and at the top (for the time being) of the scale, National Joint Industrial Councils representing the employers, artisans and labourers of all the handicrafts appertaining to a great industry.

It may be helpful and suggestive at the present juncture to briefly trace the intermediate steps which have led from such small beginnings to so impressive a result and one pregnant with possibilities for the future.

It may be observed that, although in what follows attention is devoted to the course of development in the building industry, what has taken place in this industry is only part of a larger movement of the like trend which has taken place in most other industries, also that the application of machine methods to production purposes has been a main factor in promoting the development of trades unions, and that in every case the trades unions at first have been craft unions gradually coalescing into industrial unions; a process which is going on still, as is evident from recent notices in the Press to the effect that a scheme to amalgamate all trade unions in the engineering industry is under consideration. Experience shows abundantly that when men associate themselves together in pursuit of common objects they immediately acquire an increased power and importance vastly greater than their mere numbers would lead one to expect; indeed it is notorious that trades unions have not usually contained within their membership all the men engaged in any handicraft, not even a majority of them, and the like remark would apply to employers' organisations, but the organised minority of any trade or industry has always been able to secure advantages for its members, and indeed for the trade concerned as well, which could not have been so economically obtained by unorganised labour, if indeed they could have been secured at all by the latter so long as it remained unorganised.

It is in virtue of that increased power obtained by organisation that trades unions were able to defend the interests of labour, and it was to obtain the necessary power of counterbalance that employers were constrained to follow suit. At first trades unions and employers' associations were local in character and confined to building crafts, such as masons, bricklayers, carpenters and joiners, plumbers, painters, &c., and at one time those conditions prevailed generally in the building trades, while the original respective local organisations of employers and operatives still exist in some industrial districts. In the case of the employers these local bodies were the foundation upon which the National Federation of Building Trades Employers was eventually built, but in the case of the operatives development took a different course, because in them the craft spirit was so strong that the tendency to form national unions of specific crafts prevailed over the tendency to form local groups of crafts united together as an industry, and so there grew up unions like the masons embracing the whole of the craft with local branches, or like the carpenters and joiners covering the whole craft in three large unions, subsequently reduced practically to one by absorption and alliance.

In the case of employers the tendency was at first to remain isolated as local associations operating within a given radius, but with the crafts grouped so that a builders' association was formed, sometimes containing all the crafts, as at Liverpool, but still recognising the individuality of each craft by suitable craft committees; sometimes as in London, where the association is an industrial unit of the building trade, the craft element having become absorbed or nearly so into the industry.

The effect of the organisation of the operatives by national unions of separate crafts upon the employers' organisation by isolated local associations was that every time a conflict arose between such an association and the local operatives of any craft, the employers' organisation found itself at a disadvantage, because in point of fact the conflict became one between an isolated local body of employers and a national union of operatives of the craft concerned, with heavy odds in favour of the latter.

To meet that state of things the employers formed at first a national association composed of the various existing local associations of employers, but it was soon found that this type of organisation lacked fighting efficiency and eventually a system of regional federations was formed and knitted together into the National Federation of Building Trades Employers.

Until a few years ago the position remained as first outlined; it has since undergone modification, especially on the operatives' side, as will be referred to later, but at this stage it may be as well to indicate a little more fully how the respective organisations were related to one another.

In the case of the employers, England and Wales was divided into nine regions, each region covering a certain group of counties, chosen mainly for geographical considerations of ease of inter-communication, uniformity of practice, natural boundaries of industrial areas and the like. Within each such region the local associations already existing were as far as possible induced to serve as the units of the regional federation. The regional federations combined, through representation on a central council, formed the National Federation.

From the point of view of ascertaining the opinion and focussing the views of the building industry and as a fighting machine, the employers' organisation seems to have been well conceived, and it has undoubtedly continued to progress ever since its foundation some forty years ago. It has not however proved in all regions as attractive to those branches of the trade in which the craft feeling has remained strong, and so there exists outside of the National Federation of Building Trades Employers certain national associations of special crafts such as the Master Painters, the Master Plumbers, &c., which have devoted their energies chiefly to development of the craft side of their organisation. It is eminently desirable that means should be found to put an end to this division of forces.

When the Employers' Federal Organisation entered into friendly relations with the Operatives' National Trade Unions it could only do so with each craft separately, and the views of the various crafts did not always coincide, so the relations between them and the employers were not uniform. Thus it was found possible to arrange a national scheme of conciliation for the prevention of strikes and lockouts with several of the trades, but although all were invited to adhere several stood out for various reasons, and to make any general change in agreements was necessarily a cumbrous and uncertain process.

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In the case of the operatives' organisations they necessarily implied that each craft played for its own hand and there was no machinery to enable them to present their views or opinions as an industry, neither was there much co-ordination between craft and craft when several or all of them became involved in a conflict with the employers, a thing which fortunately was rare. Eventually, however, they did become involved in the London strike of 1914, and the lesson then learned led to the formation of a United Building Trades Council, representing the major portion of the various national unions, and this has now developed into a National Federation of Building Trades Operatives embracing nearly every craft in the trade. Its detailed organisation is still in the making so that particulars are not yet known, but it is probable that it will, for practical reasons, approximate to the form already adopted by the employers.

The obvious result of such a development will be that the settlement of wages and conditions over identical areas covered by regional federations on both sides will fall to be negotiated regionally, rather than locally as heretofore, thus tending to greater uniformity of wages and conditions, and it would appear more than ever desirable that for that purpose the employers of those crafts which have hitherto held aloof from the Employers' Building Trades Federation should now belong to it, so that they may have their full say in whatever agreements may be negotiated between the Federation of the Employers and that of the Operatives.

The trend of opinion since 1914 has gone strongly in the direction indicated in the recommendations of the Whitley Report. Prior to the issue of that report the building industry had decided to adopt a scheme for what was in effect a national joint industrial council though it then had another title. The Whitley Report gave a strong impetus to that decision, and there has been brought into being an industrial council for this industry which covers Great Britain.

There are 66 representatives from the operatives' side and 66 from the employers': 17 operative National unions comprised in the National Federation of B.T. Operatives are represented, and there are ten representatives for Scotland; the National Federation of Employers and its constituent regional federations are represented by 32 and the Confederation of National Associations of Building Trades Sub-Contractors covering seven branch trades by 20 representatives; Scottish employers have 10 and the Institute of Builders 4 representatives. The constitution provides for the formation of regional councils to be linked up with the National Council, and this work is to be taken in hand at once.

Mention has just been made of the Institute of Builders. This is a body which occupies a position analogous to the Royal Institute of British Architects. Its main business is to raise and to encourage the maintenance of a high standard of commercial conduct and practice in the building trade; it was founded in 1834 and incorporated in 1884.

The various trade associations and federations and the various operatives' unions to which reference has been made have for their main object the regularisation and protection of the business and commercial relations of their members in dealing with one another or with the general public. These latter bodies accept all comers who are in the trade; the Institute discriminates, making professional reputation and technical qualifications a criterion of fitness for membership. It should now be possible for the reader to visualise the scheme of development which has taken place in this industry, from the scattered local unions of operatives and local associations of employers through the craft national unions of operatives and the federal system of the employers up to the uniting of the two parallel streams of evolution in the Industrial Council for the Building Industry, a process which has occupied several generations.

The next question is what will be the functions of these various bodies in the future.

Well, the intention is that the local bodies will continue to exercise local autonomy in their respective districts and fulfil the functions they have hitherto fulfilled so far as those functions are not passed on, as a matter of convenience, to the next larger unit, viz., the federal regional bodies. These will continue to act similarly but for a wider area, and there will be a tendency for their importance to increase and for the importance of local bodies to decrease a little relatively to one another.

The main relations of the future so far as wages and conditions are concerned will probably be between the National Federation of Employers and the National Federation of Operatives—those bodies will be likely to settle between them all broad questions of principle.

The Industrial Council comes in where these other bodies finish, its function being to secure the largest possible measure of joint action between employers and workpeople for the development of the industry as a part of national life and for the improvement of the conditions of all engaged in that industry. It will be open to the Council to take any action that falls within the scope of that general definition, but there are plenty of sub-heads set out in the constitution, all of them desirable objects but too lengthy to be set out here.

It will be linked up to localities through the Regional National Councils, so that there will be a clear road and complete machinery for the ascertainment, the formulation and the expression and focussing of opinion in and for the building industry.

It will be obvious that this industry has now reached a fairly advanced stage of organisation, and the progress that has been made represents many years of devotion in time and money. Many men on both sides have been in the movement long enough to have seen the greater part of the developments which have been precedingly referred to, and to them looking back it will be perhaps with a feeling of surprise that they see how great a change has taken place from the days when as members of small isolated organisations they took in hand the work which has resulted in so much achievement, a great part of which could not have been foreseen let alone been hoped for. Fortunately they builded better than they knew, and although admittedly plenty remains to be done, an organisation has been built up with which those who will have to carry on may do great things for their industry if they will take up the work with courage, emulation and enthusiasm.

ILLUSTRATIONS.

DESIGN FOR WAR MEMORIAL, NEAR JERUSALEM.

THIS design was submitted unsuccessfully in a recent competition. The conditions laid down for competitors were unusual. The site was not specified, nor the amount of funds available, nor the character of memorial that was desired. Designs bore their authors' names and rank. The only clue to the intentions of the promoters lay in a hint that something rugged in character, forming a landmark in a prominent position, was favoured, and that its appearance should not be Oriental. Designs were invited through military channels, and it thus appeared that officers and men of the Egyptian Expeditionary Force serving in Palestine and Egypt were the only persons eligible as competitors. This was not however explicitly stated. If such was the case many architects who took part in the Jerusalem campaign must have been excluded, having been transferred since to other theatres of war. Moreover, architects and sculptors serving in the trenches can hardly have been in a position to submit drawings. The name of the successful competitor has not yet been published.

SAN GREGORIO, VALLADOLID.

BUILT by Philip Vigarni in 1488-96, and laid waste by the French in the Spanish war of independence, the late Gothic façade is lavishly adorned with statues, ornaments, and coats of arms, &c. The alienation of taste from the geometrical severity of earlier Gothic art, the predilection for rich and artistic ornamentation, and the increase of technical dexterity led, at the end of the fifteenth century, to the erection of a group of imposing buildings of extraordinary originality and picturesque charm, of which the façade of San Gregorio is a striking example.

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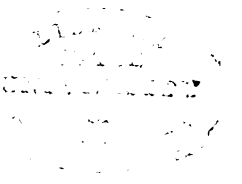
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THE BISHOP'S CHAIR.

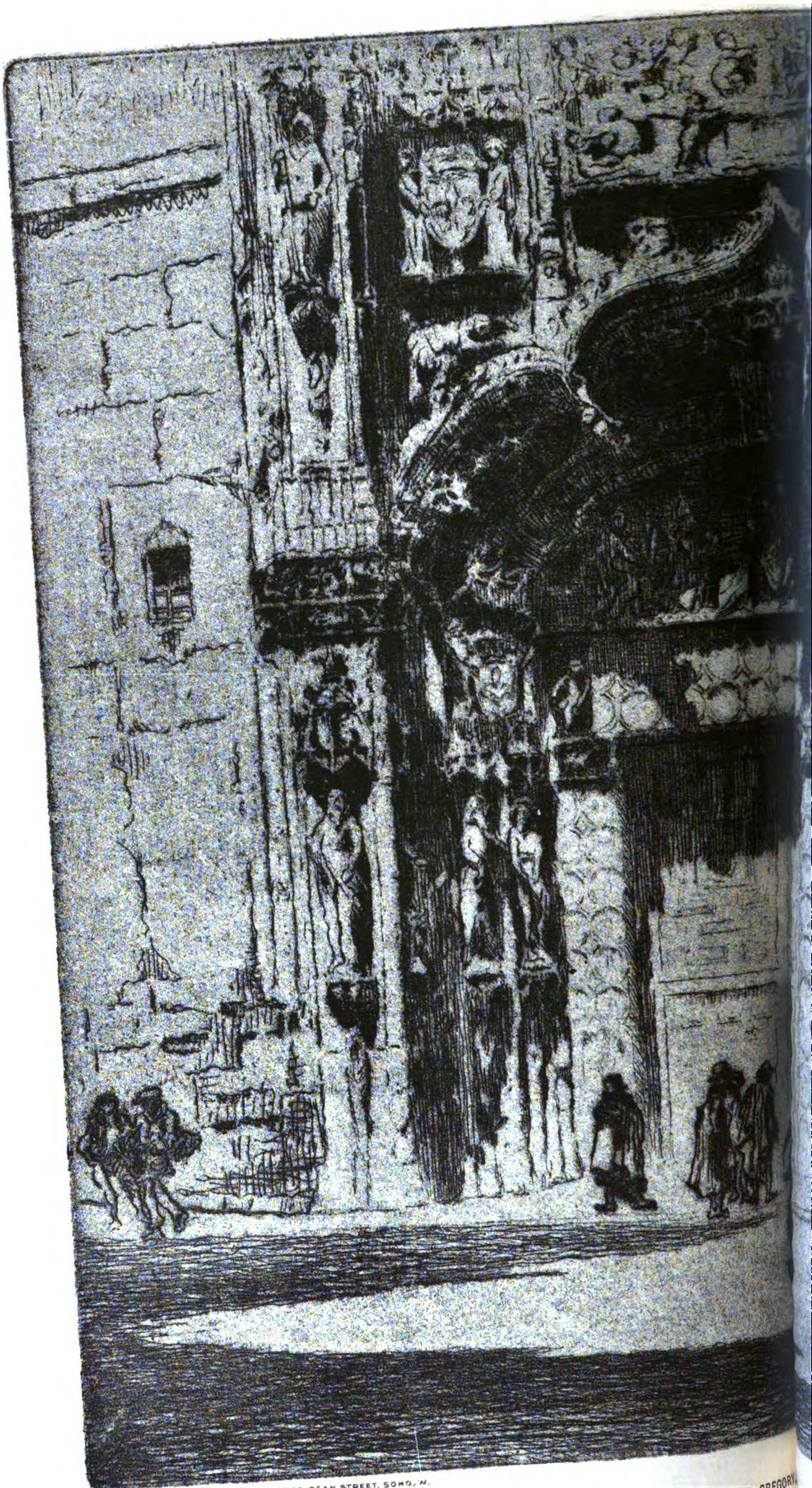
CHURCH OF THE HOLY SPIRIT, CLAPHAM COMMON, S.W.

H. P. BURKE DOWNING, F.R.I.B.A., ARCHITECT.

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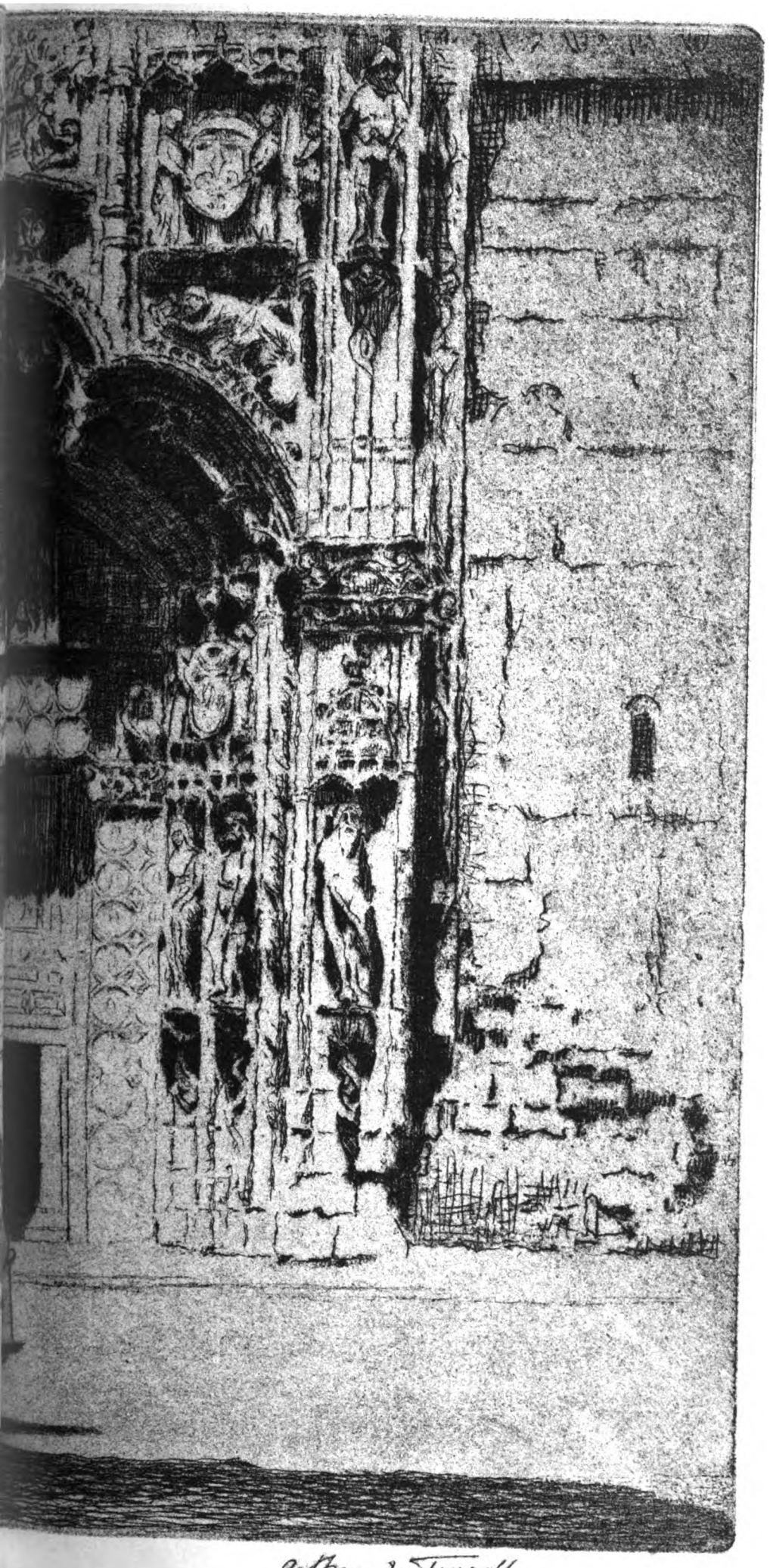
"INK-PHOTO" SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

ST. GREGORY,
From an Etching by

Exhibition of the Royal Society of Painters, Etchers and Engravers,
1918.

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pt: 20th 1918.



Arthur J. Turrell

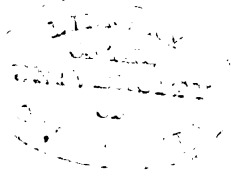
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J. TURRELL.

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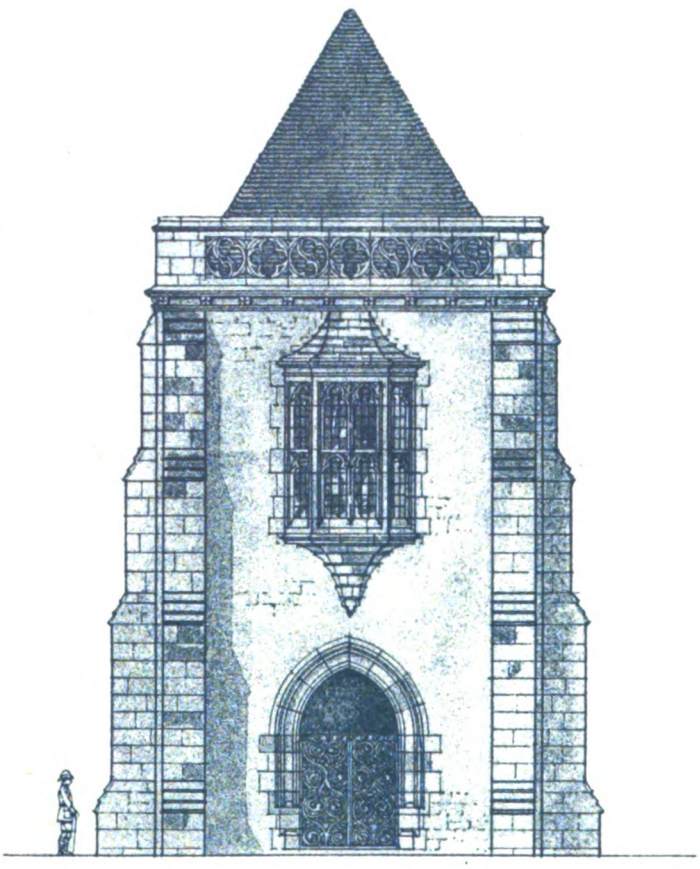


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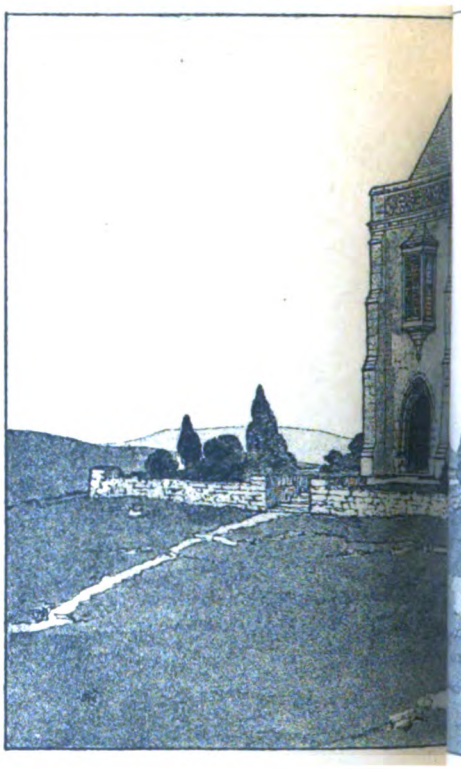
GENERAL SCALE

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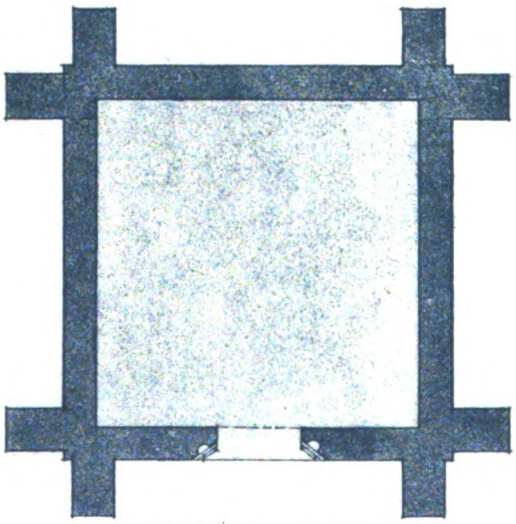
DESIGN FOR MEMOR



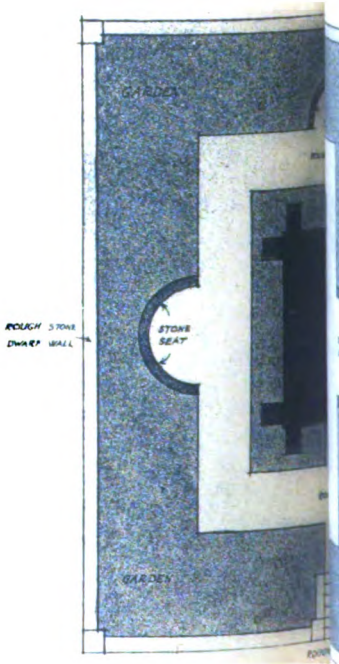
ELEVATION



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GROUND PLAN



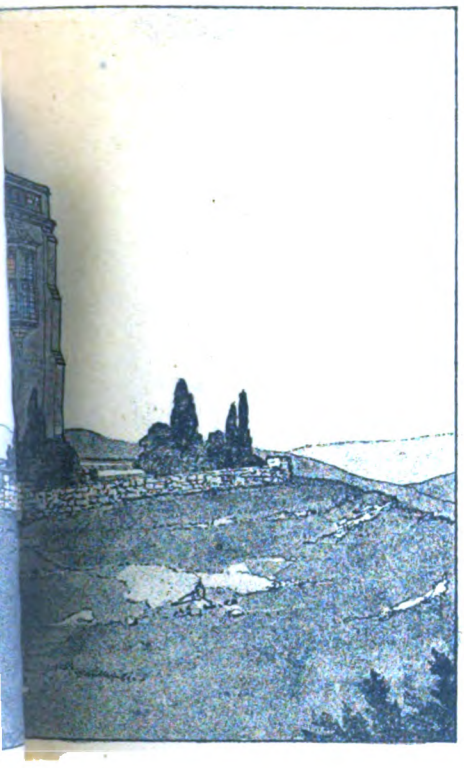
PLAN OF SITE (

By Capt. Martin

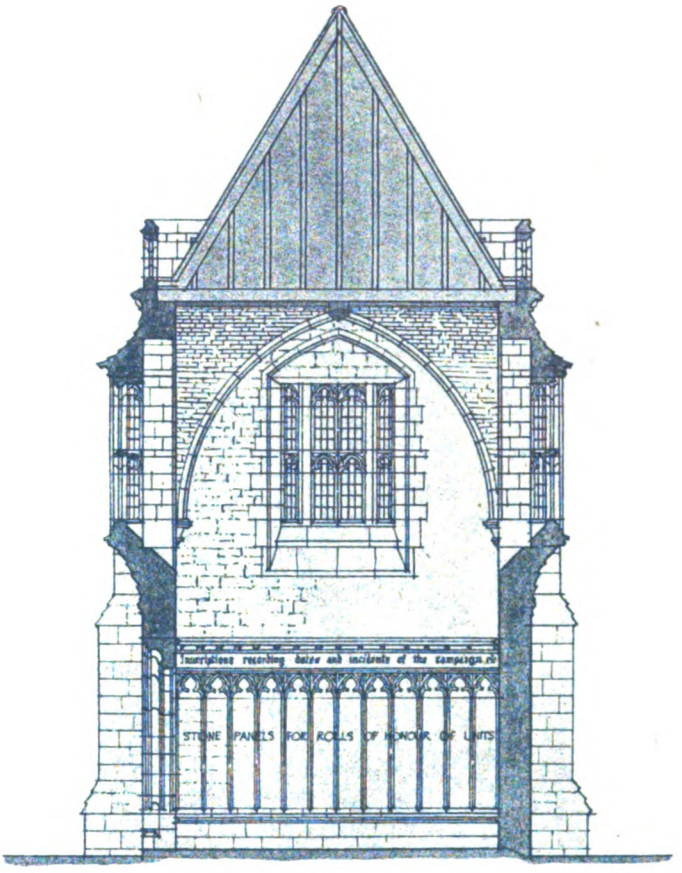
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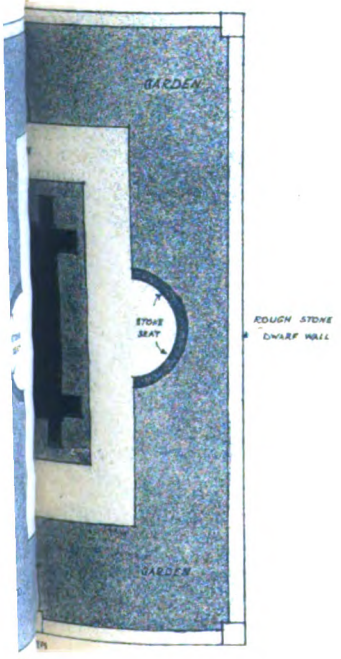
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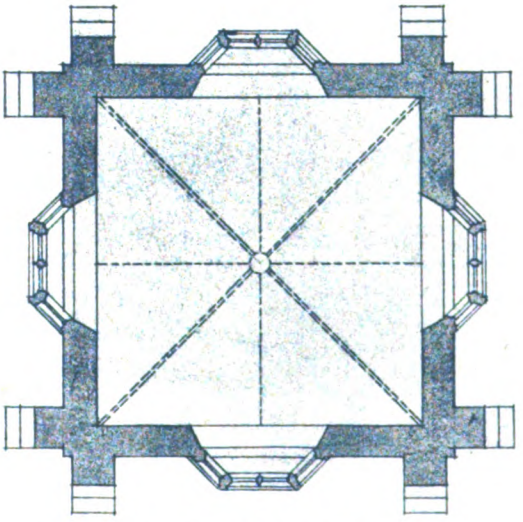
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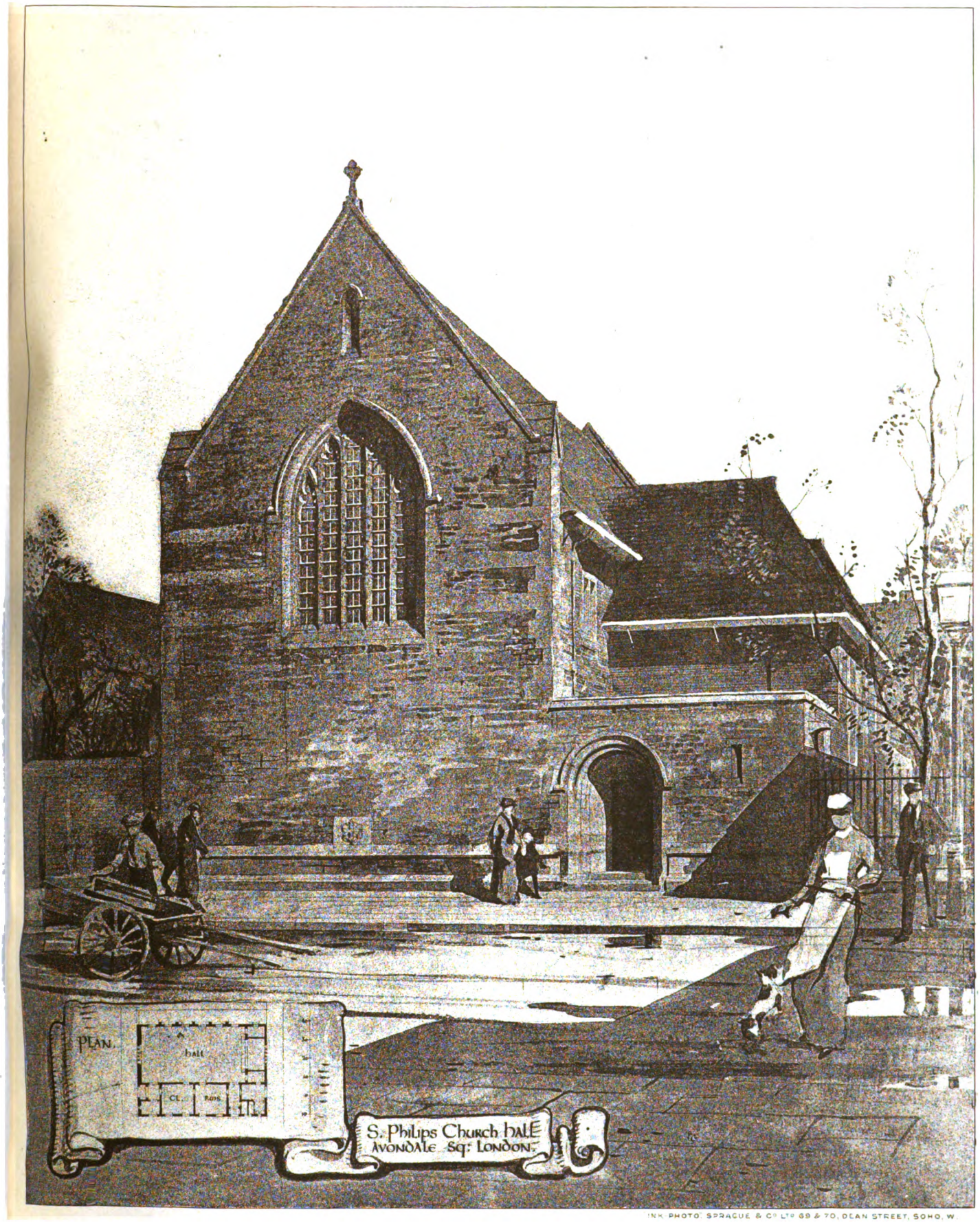
PLAN THROUGH WINDOWS

INK PHOTO SPRAGUE & Co LTD 69 & 70 DEAN STREET SOHO W

BRIGGS, A.R.I.B.A.

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INK PHOTO: SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

S. PHILIP'S CHURCH HALL, AVONDALE SQUARE, LONDON.

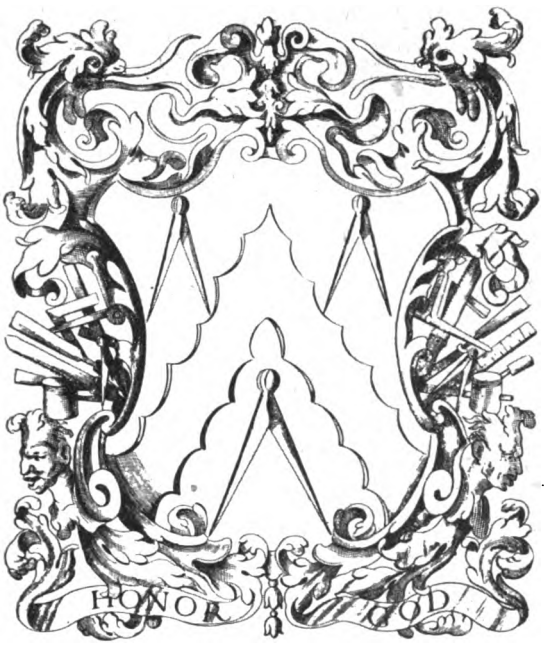
H. P. BURKE DOWNING, F.R.I.B.A., ARCHITECT.

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THE WORSHIPFUL COMPANY of CARPENTERS; TRADES TRAINING SCHOOLS. WITH THE CARPENTERS ARE ASSOCIATED THE FOLLOWING COMPANIES:

THE PAINTER STAINERS
THE TYLERS AND BRICK-LAYERS
THE JOINERS
THE PLAISTERERS
THE GLAZIERS
THE WHEELWRIGHTS



THE CARPENTERS'

THE ARMS OF THE CARPENTERS' COMPANY
From Welch's Coat Armour of the London Livery Companies

THE City Companies connected with the various building crafts, the chief of which is the Carpenters' Company, are carrying out an educational programme which merits the special support of the various organisations representing the building industry, for reasons which are obvious on consideration.

The Government has promulgated a policy for the organisation of trades by combined councils of masters and operatives. The City Companies were doing a similar work four hundred years ago, when they regulated the status of masters and operatives and when their Courts formed a Tribunal of Appeal. The whole system of apprenticeship, so important in industry, and especially so in the building crafts, was due to the Companies, and now that the period of apprenticeship is often unduly shortened, and there is a general recognition of the necessity of supplementing it by educational instruction, the Companies provide the latter by a well considered scheme of evening classes. The Carpenters' Company, which has taken the initiative in this educational movement, has gathered additional strength by its association with six other companies, the Painter Stainers, the Tylers and Bricklayers, the Joiners, Plaisterers and Glaziers. The Wheelwrights, though not connected with building, who represent a branch of wood craftsmanship, are also associated with the group. The Plumbers have kept apart, but have done immensely useful work in their promotion of Registration, which has been of the first benefit to the health of the whole community. The Masons have the distinction according to many authorities of being the parent body out of which the institution of Freemasonry has been developed, and together with the Blacksmiths are not yet included in the group. The Carpenters have in their educational scheme shown a wide liberality and sympathy with other forms of craftsmanship, and their educational courses cover not only the field of the crafts associated with the working of wood, but that of masonry, plumbing, and smith's work in addition. Living as we do in an age of amalgamations which is drawing all the severed building interests together, there is good reason why builders' associations should give their official support to the educational scheme of the Trades Training Schools, which if suitably assisted may form the nucleus of a national system of craft teaching organised by the building crafts, and representing their wants and requirements more completely than any outside body can do. Should this come about it will be another example of the gradual evolution of our institutions by voluntary agencies which has throughout history been a feature of our civilisation. The counterpart of many modern incidents in the relation of the trades is to be found in the history of the Companies. Thus the demarcation disputes of to-day have their parallel in the differences which arose between the Carpenters and Joiners and many other companies, as to the limits of their crafts; the disputes between masters and operatives were usually solved within the Company, with an occasional reference to the Lord Mayor, just as on the new Trades Council similar differences are to be solved by like methods. It is to be hoped that in the work of reconstruction which lies in front of us full use will be made of the machinery left by the past, which only needs readjustment from time to time to make it equally efficacious in the present. The building trade in supporting the Trades Training Schools will be helping an institution which has the by no means slight advantage of traditional connection with the oldest of our craft organisations, combined with the active sympathy of the Corporation of the City of London, the greatest mercantile community in the world, which are assets even in the most democratic of communities. The various classes held at 153 Great Titchfield Street are open to all those engaged in the various trades. The fees are almost nominal, being on an average 15*s*. for the year of three terms, and half fees for apprentices. Tools for students are with a few exceptions provided by the Company. The year's courses are divided into three terms: September 23—November. 29; December 2—February 14; February 17—May 2. Classes in most subjects are held from 7.30 to 9.30 for three nights in the week, but on most other nights the workshops are open for practice. A brief allusion may be usefully made to the nature of the instruction given. In *Carpentry* a drawing class is held once a week in which students are taught how to make scale drawings of floors, roofs, girders, partitions, &c. Lectures are given once a week on the various branches of carpenters' work. The practical work at the bench includes exercises in joints for elementary students, while advanced benchwork includes the setting out and constructing of models to scale and details half full size.

Special instruction is given to members of the craft who propose to emigrate. In *Joinery* a drawing class is held weekly, instruction being given to juniors and seniors on different nights. Practical classes are held, the work comprising doors and windows, finishing curved work, airtight case work, and aeroplane propeller construction.

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Lectures are given by the instructor weekly to juniors and seniors separately, and deal with timber woods used in joinery, machinery, joints and other subjects. Special classes are also given for handrailing and stairbuilding. Practical classes are held for *Wood carving* which include drawing, modelling and wood carving, and the making of artificial hands, and a *Life Class is* provided which students in stone and wood carving are advised to attend. The course of instruction includes anatomy, modelling and carving and the designing of figures.

The complete course in *Masonry* comprises instruction in all the work of a mason in marble, stone, alabaster and lathe work, and each student is taught to draw to scale. In the elementary course the student is taught how to cut up the rough stone, to square it, joint it, and bond it into walls. Generally the conversion of stone, methods of cramping, dowelling, the use of straps, bolts and methods of securing stone to modern iron structures, key jointing over wide spaces, are taught. In the advanced course the sections of raking and circular mouldings, tracery heads, mouldings and the best way of jointing them, are dealt with, and the turning of balusters. Gothic and Classic work and stone staircases form a part of the subjects treated. The associated Companies welcome the attendance of masons in responsible positions who require special instruction, while they are also prepared to grant scholarships to students nominated by the Operative Stone Masons' Society.

The practical classes for *Stone Modelling and Carving* are similar to those arranged for wood carving. *Tylers and Bricklayers* receive practical instruction on two evenings a week and one evening is devoted to instruction by lecture and drawing.

In the practical classes for *Smiths*, the student is taught how to draw, shape, and weld all iron work in connection with every kind of roof, the making of wrot iron windows and doors, plate laying and the preparation of angles, tools, gates and fences, engine work, brazing, leaf work and embossing.

Plasterers are taught to work from drawings, and to set work out to scale; they are instructed in the nature of materials and their use; in lathing, rendering, floating and setting, in running mouldings, in rapid plastering and setting out parallel ceilings and arches, and the use of fireproof plasters and cement, and also the formation of columns and other decorative features, and in modelling.

Plumbing includes instruction in joint wiping, pipe bending, sheet-lead working, lead casting and telephone constructing work, and the course includes lectures and practical work. Students are instructed in sanitary work and that connected with water services, and with heating as well as lead burning by the oxygen gas apparatus.

Painting includes every branch of the painter and stainers' work, the use of brushes and materials, distempering, imitative painting and varnishing. The painter is also instructed in the use of architectural terms and in sign writing.

Great attention has been given to the course for *Electricians*, the elementary course of which includes practical wiring, plugging walls, making joints in cables, and installing simple circuits for lighting, bells and telephones. Technical instruction is also given. The advanced course also includes practical wiring, steel conduits, armoured cables, precautions and forms of protection, telephone, bell and power circuits, the fixing and aligning of motors, the location and removal of faults, while the accompanying technical instruction is carried much further. The last of the Companies to be associated with the Schools is the *Glaziers*, and practical classes are given for *Craftsmen in Stained Glass* and other glazing. Instruction will be given which will cover the ground work or primary principles of the methods and processes employed, while artisans daily occupied in any process will be given the opportunity of studying others. Some students will thus be employed in learning drawing and design and others the processes by which such work is applied in the actual craft processes. The *Wheelwrights* course includes instruction in this interesting craft, but as this is not one of the building crafts, though allied to that of the carpenter, it is not necessary here to allude to it.

It will be seen from the foregoing that these courses are practically free, while a large number of prizes are given for proficiency. The teachers are men of experience in the several classes, the school being under the direction of Mr. Banister Fletcher, F.R.I.B.A., F.S.I., Sheriff Elect of the City of London. As is well known the Company organised periodical exhibitions of craft work and annual courses of lectures, but these though connected with craft education have no direct bearing on the work of the Trades Training Schools. The Carpenters' Company do not suggest that its courses are a substitute for apprenticeship, which has been always the cardinal feature which the ancient organisation of the guilds was largely formed to promote and maintain, but it very materially supplements the shorter time apprenticeships which are so frequent to-day.

In past years it was customary to insist on the claimant to the Freedom of a Company producing a "master piece," especially in the provincial and foreign guilds, and the stringency of the problems set is well exemplified by the account of some of the tests which were imposed by the Aberdeen Guild of Wrights. We read that the applicant had to make "a spring table, consisting of three folding leaves, each leaf folding above another; the first leaf when folded over is to answer a dining table; the second leaf to answer a quadrille or whist table; the third leaf to answer as a backgammon table; the said three tops are to hang on one pair of hinges; out of the body of the said table is to arise a writing table with nine drawers, and a book frame on springs, the said frame to have eagle claw feet, with a shell or flower on every foot, the said table to have close banded and chequer feather bands." Another little test is thus described: "A dressing chest of drawers and cabinet, the drawers to have two projections consisting of four drawers in each projection, with a sliding cupboard in the middle, the cupboard to be circular on the back, with one "Escolley" shell in the whole breadth of the cupboard; above the cupboard there is to be a writing table to draw out with springs supported by itself; every drawer to be divided so as to hold all sorts of necessaries for a lady's toilet, every division of the said drawers to have boxes for filling its own place four square every way." We feel after reading of these tests that it would have been impossible to set our forefathers more difficult problems in craftsmanship, and those who succeeded formed a real aristocracy of labour. We trust that the new Trades Council of the Building Crafts will support a School in which the building crafts of London—the oldest of which has an antiquity of many centuries—are carrying on according to modern principles the great purpose for which they have worked since the days of our Norman and Plantagenet kings, when the king's carpenter filled an important and honoured position, and the carpenters were custodians of public interests in matters of building.

LIEUTENANT CHARLES HERBERT HARTMANN, A.R.I.B.A., of the Royal West Kent Regiment, younger son of Mr. and Mrs. Augustus Hartmann, of 14 Kensington Square, W. 8, was reported missing on July 2, but is now known to have been killed in action on that date. He studied architecture at the Ecole des Beaux-Arts, Paris, and was with the late Mr. John Belcher, R.A., joining the Artists' Rifles on the outbreak of the war.

SPEAKING at a meeting at Wolverhampton, the Mayor (Councillor J. F. Myatt), made reference to the housing question, and said hundreds of houses had to be provided in the borough. One of the difficulties they had to surmount was that much of the land which they proposed using as sites was now being developed for the production of food. It would be their aim, however, to erect the houses in such a way as to provide garden ground for their use in the future. He was not in favour of building rows upon rows of houses, with a large common yard, which was both undesirable and insanitary. He believed that two houses together were sufficient, with plenty of land for fresh air and the facility for growing all the garden produce they required. The power to obtain this class of dwelling was in the hands of the people themselves, who should petition the Council, and determine they would have no other.

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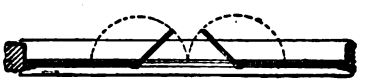
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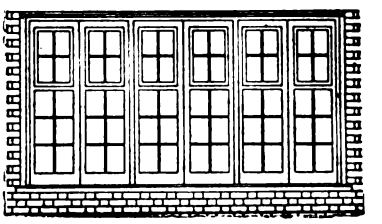
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SECTION.



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ELEVATION: Windows closed.



PLAN: Left Casements folded back, Right partly folded.

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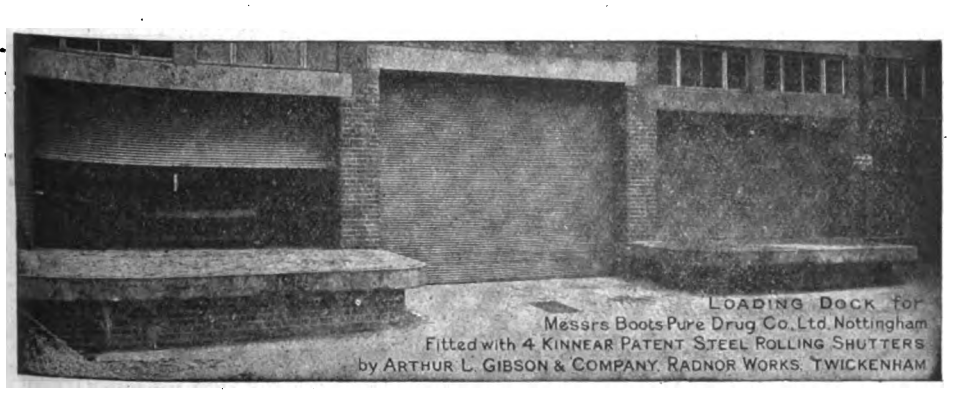
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GENERAL.

LEVEN (Fife) Housing Committee have prepared plans for 100 houses under their housing scheme.

THE late Mr. Hugh McKerney, builder and contractor, of Hartington Road, Preston, Lancs, left £14,226.

CORPORAL HOWARTH FIELDING, R.E., architect and surveyor, of Accrington, is reported killed at the Front.

MESSRS. R. & J. DUNBAR have submitted the plans for a new meal mill at Cowie, which have been passed by the Stonehaven Town Council.

DAMAGE estimated at £4,000 has been done by a fire which broke out at the sawmill of Messrs. Falconer Bros., Queen Street, Grimsby.

THE late Mr. Edward Cookworthy Robins, F.S.A., F.R.I.B.A., who died at the age of eighty-seven, left estate valued at £19,046.

MR. JOHN FITZHERBERT CAMPBELL, of Woodseat, Stafford, and Mintons, Ltd., Stoke-on-Trent, left £101,636, the net personalty being £59,877.

THE Rotherham Rural Council have approved the plans for the reconstruction of the Oakwood V.A.D. hospital which was recently burnt down.

THE new Sherift of the City of London, Mr. Banister Fletcher, F.R.I.B.A., will be admitted to office at the Guildhall on Saturday, September 28, at 10.30 A.M.

DR. CLEMENT STEPHENSON, D.Sc., veterinary surgeon, of Newcastle-on-Tyne, left £5,000 to Armstrong College, Newcastle, for building and equipping laboratories.

DAMAGE estimated at several thousand pounds was caused by a fire at Westlea, West Ferry, Dundee, the residence of Mr. Peter Swan, jute merchant. The fire broke out in the top part of the villa.

THE name of Mr. Charles G. Soutar, of the firm of M'Laren, Sons & Soutar, architects, Dundee, has been brought to the notice of the Secretary of State for War for valuable services in connection with the war. Mr. Soutar has been engaged on important war work in the neighbourhood of Ripon.

A SUM of £20,000 has been offered by Councillor W. Greenhalgh, of Southport, towards the endowment of a college or hostel which it is proposed to erect for students for the Wesleyan ministry at Cambridge University and towards which Mr. Gutteridge, of Haslemere, Surrey, gave a sum of £30,000.

MR. JAMES MILLER, F.R.I.B.A., of Blythswood Square, Glasgow, has prepared the plans of the new parish church in Dumbarton to be erected by Messrs. McMillan & Sons, shipbuilders, in exchange for the site of the present church which they propose to include in the boundaries of their new shipbuilding yard.

MR. ENOCH HILL, secretary of the Halifax Permanent Building Society, has received a letter from the Local Government Board stating that the general question of the possibility of financial assistance from the State to private enterprise in building houses for the working class after the war is under consideration, but no decision has yet been reached in the matter.

THE war shrine which has been erected at the church of St. Margaret Pattens, Eastcheap, E.C., was recently unveiled. The shrine is made from the timber of the old training ship "Britannia," and has been erected to the memory of Commander D. de Beauvoir Stocks, D.S.O., Legion of Honour, R.N., and to his fellow officers and men who were drowned in the North Sea last January. The service was conducted by the Rector, the Rev. St. Barbe Sladen, uncle of Commander Stocks.

THE Gainsborough Urban District Council have under consideration the recommendation of the Health Committee that a block of buildings be erected in a field near the hospital (Foxby Hill) for the treatment of tuberculosis cases, and that accommodation be provided for twelve or fourteen patients (male and female), also for two nurses, and a room for cooking and domestic purposes. The committee recommended the Council to submit the scheme to the County Council, the proposals recommended being subject to the whole cost of the scheme being borne by the County Council.

THE following resolution has been sent by the National Federation of Building Trades Employers of Great Britain and Ireland to the Prime Minister and the Minister of Reconstruction:—"That in the opinion of this federation, owing to the arrears of work in the building trade, together with the immediate industrial needs after the war, it is essential that Government departments and public bodies throughout the United Kingdom should, for a suitable period after the war, refrain from commencing any large building or constructional work unless of very urgent national importance."

THE death is announced of Mr. Charles Pether at the age of seventy, builder and contractor, of Burford.

MR. W. T. COX, F.S.I., surveyor to the Maidstone Trustees of the Poor, has resigned on the ground of ill-health.

THE Monmouthshire County Council propose to hold an inquiry into the question of providing an isolation hospital for the urban area from Blaenavon to Cwmbran.

THE Urban District Council of Colwyn Bay and Colwyn have sent a resolution to Denbighshire Education Committee advocating the erection of a secondary school at Colwyn Bay.

THE Fleetwood Urban District Council have under consideration a plan for a suggested site covering about fifty-one acres for the purpose of erecting houses for the working classes.

ON Friday last serious damage to the extent of several thousand pounds was caused by an outbreak of fire at the workshops of the Caledonian Railway situated on the Edinburgh Road, Perth.

THE Devonshire Education Committee of the County Council has decided to erect a secondary school at Dartmouth. A Selection Committee has been appointed to confer with the Dartmouth Town Council on the question of a site.

THE Halifax Town Council have approved a proposal to erect a new central national kitchen and restaurant on a site in Bull Close Lane, and have also authorised an expenditure of £3,500 for buildings and £1,000 for equipment in connection therewith.

AT the last meeting of the Wishaw Town Council the minutes of the meeting in May last were confirmed, which deal with the question of the purchase of about forty acres of land adjacent to Greenhead Road and Stewardton Street for the purpose of erection after the war of 500 houses.

THE Tenbury Rural District Council have formulated a housing scheme embracing the erection of twenty artisans' houses in Tenbury at a cost of £9,600 and forty-two houses in the district at £16,710, which, including cost of fencing and other expenses, makes a total of £25,770.

THE Droylsden Urban District Council have decided that for the present the scheme for town planning the whole of the district be not proceeded with, but that the alternative scheme of the surveyor be proceeded with for the provision of 200 houses on the Council's and adjoining land to the north of Manchester Road.

AT the last meeting of the Cement Manufacturers' Federation a resolution was passed, "That all members of the Cement Makers' Federation pledge themselves not to trade with the Central Powers and their allies for a period of ten years after peace is declared." A copy of the resolution has been forwarded to the Prime Minister.

DAMAGE to the amount of £20,000 has been caused by fire at Loch Katrine Distillery, Muirhead Street, Glasgow, owned by the Distillers Co., Ltd. The two uppermost floors of a large five-storey building used as a grist store were destroyed and the contents of the other floors much damaged; and a long, low building fitted with a grain conveyor was burned out.

A GARDEN fête in aid of the Middlesex Prisoners of War Fund is to be opened to-morrow (Saturday) by General Sir Francis Lloyd in the grounds of Avenue House, Finchley, which will be open for the first time since they were bequeathed to the public by the late Mr. H. C. Stephens, who was for so many years member of Parliament for the Hornsey Division.

MR. THOMAS LASCELLES KIRK, of Norton, near Stockton-on-Tees, left a sum between £3,000 and £4,000 for the purpose of restoration and improvement of the parish church, Stockton-on-Tees, also one-sixteenth of the residue of his property to the Vicar and churchwardens for further improvements. The estate has been proved at the amount of £125,533.

THE Spalding Rural District Council have approved plans presented by Mr. Frederick Parker, the county architect, for proposed new cottages. The cottages are to be erected in pairs, and there will be three rooms downstairs and three bedrooms—one large and two smaller ones. In no case will less than a rood of land be allowed to each cottage, but in most cases there will be an acre for each pair.

A MEETING of master builders of St. Austell, convened by Mr. W. J. Nicholls, chairman of the Urban Council, was held in the Council Chamber on Thursday last week, when it was decided to raise the wages of all carpenters and masons to 11*d.* per hour. The men, in their requisition, asked for 10*d.* per hour, but having regard to the rate of wages prevailing in the clay district the meeting resolved unanimously to give 11*d.* per hour for a recognised week of 53½ hours for winter as well as summer months, with time and a quarter for overtime.

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THE ARCHITECT
AND CONTRACT REPORTER

VOL. C.—2597. SEPTEMBER 27, 1918.

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What the Architect's Client Wants.

As success in life depends on the manner in which we can fulfil certain requirements it may be useful to consider in broad and general terms what it is the architect's clients want in matters of building. What is sometimes defined as the want of appreciation of architecture on the part of the public may prove on analysis to be due to the fact that the architect of to-day has in many cases failed to realise his true functions and overlooked certain obvious factors which reflection would convince him were paramount considerations, but to which he in many cases has not given their proper weight. How universal and powerful these factors are can easily be demonstrated.

Very few of us possess means that can be described as being "ample"; building is expensive, and when the majority of men build it is because they have little or no alternative. Most men have calls on them which they must fulfil; the majority also have tastes they wish to indulge if possible, but which they can only gratify to an extent limited by the means they possess after essential claims are met and satisfied.

It is rare to find anyone who builds a house because he wishes to obtain a certain definite æsthetic result, or because he has a passion for architecture in the abstract, and in the great majority of cases the client seeks the service of an architect because he cannot find an existing house to suit him, or because he believes it may prove a good investment; that is to say, his controlling motive is almost purely practical, and whether the client is a practical business man or a lover of some form of artistic expression, with plenty of leisure, the same reasoning applies, though the statement may at first sight seem open to question.

The practical business man will often be a hard critic of the architect's mistakes, which he will be quick to see and condemn; his time is valuable, and he will object to be bothered with the consideration of defects which he puts down to the architect's incompetence. Many architects have discovered, to their great disappointment, that the client possessing culture and artistic tastes is equally intolerant of small practical defects which give trouble, but the reason is in reality easy to understand. There is no man who dislikes trouble so much as the man of leisure, and the connoisseur who has an enthusiasm for painting or for collecting furniture or curiosities is usually so much absorbed in the pursuit of a special branch of art that he is in reality indifferent to art as expressed in other terms, and so, while he has more appreciation of the æsthetic side of architecture than the practical man, he is quite as intolerant of defects which cause him trouble or expense. Both types of client will give their architect a bad time if a house is cold or draughty, if a roof gives trouble, and any failure in the arrangement of the kitchen or service department will act like an irritant poison, working through the servant to the client's wife, and finally to the client, who will hold his architect responsible.

It will be apparent that what the client really wants, whether specifically stated or not, is a house which is convenient and comfortable, will cause its owner the smallest possible expense in subsequent repairs and upkeep, to which we may add that whether a client is rich or poor it is always well to assume that the house may be sold at some future date and should, wherever possible, represent a reasonably good investment of capital. For this reason the architect should possess sufficient knowledge and judgment to insist on advising his client on the matter of site, whether directly consulted on the question or not, for it is human nature to hold the architect responsible, not only for the mistakes he has committed, but for the mistakes he has allowed his client to commit without protest.

If an architect is employed to design a commercial building, such as shop premises, warehouse, or factory, the requirements are even more exclusively practical than in the case of a house. No satisfactory æsthetic result will please the man who finds that full use of the opportunity of displaying goods, space for the easy arrangement of machinery, or proper lighting have been sacrificed. All these and many other details mean a gain or loss which have a direct money value. Again, when we take the case of the hotel, block of flats o built as a speculation, the same conditions hold, the problem being to obtain the greatest amount of floor space that can be efficiently lighted and conveniently divided. If the architect overlooks a possible claim for ancient lights his client may find himself compelled to omit an upper storey, the deletion of which will mean the difference between profit and loss on the amount expended, while a building may be so planned as to be suitable only for one purpose, when more thought would have resulted in a plan which was capable of arrangement for alternative requirements. We have often seen buildings which were indifferent specimens of architectural design, and found, on examination, clever planning and arrangement, proving that the so-called commercial architect had put himself completely in his client's position and considered the building in its income-producing aspect. In so doing a clear vision of what is evidently the vital and fundamental problem has often given architects of mediocre ability an advantage over their more gifted colleagues.

We do not believe that the world has changed, or that there is reason to regret modern tendencies. At all times, and in all countries, the great majority of buildings were erected for purely practical ends, and the æsthetic expression of those ends has been arrived at unconsciously. It is true that in Italy, and to a less extent in France and elsewhere, a small number of the greatest buildings have been built primarily as architectural monuments, and, secondly, to serve some practical purpose. In such cases the practical end sought has been the utmost æsthetic expression, and architects have shown their practicality in ignoring other considerations, as Vanbrugh did at Blenheim, but these are exceptions to the general rule which applies to the "habitations of men in all ages." We have everything to gain and nothing to lose in frankly adapting ourselves to the standpoint of our clients, nor will the art of architecture suffer in the process, for history proves it is no exotic plant to be produced by artificial means, but the spontaneous production of human invention directed towards a natural end. In a subsequent article we will call attention to the reasons why some architects' work fails, to the detriment of the architect's chances.

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Illustrations.

GRETNA SCHEME

OUR illustrations of this scheme will be completed in a fortnight's time, when we shall give a general description of the work.

NOTE.—We have had to reduce our illustration to singles, cutting out our descriptive titles at the last moment in order to meet the requirements of the Authorities.

Notes and Comments.

Our Illustrations.

A LIST of our illustrations will in future be given at the head of this page, and any specific reference to them will either be made in our first note or on a page noted on the list. Where the illustrations "speak for themselves" we shall add no comments, unless a description is sent to us for insertion, because it is difficult, owing to the shortage of paper, to find space for all the matter we had originally intended to give. The illustrations in this issue are given up to the Gretna scheme, and further illustrations of it will be found in the Housing and Town Planning Review of this issue. We shall complete our series of illustrations of the scheme in a fortnight's time, and shall at a future date illustrate the Eastriggs part of the settlement. A notable feature—and a very good one—of the scheme is the manner in which Mr. Raymond Unwin has contrived to give something like free play to a large number of architects working under his general direction, most of whom are well known by the work they have done in an independent capacity. We hope it will not be very long before freedom of action is allowed again to both architects and contractors, and the full current of our national life can take its accustomed course without thought of permits or prohibitions.

Present Day Applications of Psychology.

Under the above heading a small book has been issued by Messrs. Methuen & Co. It is written by Charles S. Myers, and specially deals with the scientific aspects of Industry, Education and Nervous Breakdown. Many well known facts are described in precise terms; thus we are told that "fatigue and practice work in opposite directions, and the work curve obtained is the resultant of these factors," and again, "the influence of practice is great at first, but smaller later, whereas the influence of fatigue is small at first, but greater later." We are also told that work is not performed regularly but "in spurts and irregular waves, due to fluctuations of volitional tension dependent upon varying interest, emotion, &c." It is certainly a good thing that the influences which tend to facilitate or retard production and improve or deteriorate the human element employed upon it should be scientifically studied and analysed. The Psychology of Advertising is dealt with in one paragraph, which states that it was found that when tests were made as to the placing of advertisements 33% of those recalled were those posted on the right upper quarter of a page, 28% on the left upper quarter, 23% on the right lower quarter, and 16% on the left lower quarter. In other directions much useful work may be done, especially in economising effort. In America it was discovered that the number of separate movements involved in bricklaying could be reduced from 18 to 5, with the result that 30 men working in the new manner were able to lay as many bricks in the day as 100 working in the traditional manner. A saving of 60% is not a small item!

The Position of District Surveyors.

Hard as has been the lot of many architects during the years of war, there is one section of the profession which has been harder hit than any other—we refer to the District Surveyors, who, under the present regulations, are debarred from taking private practice. Were they paid by salary they would have been among the fortunate minority, but, unfortunately for them, their payment depends on the actual number of buildings erected in their districts. The immense responsibilities of a district surveyor are well known to those who have experience of building in the London area, and the admirable manner in which they discharge their duties and interpret the multifarious clauses of those truly formidable documents, the London Building Acts, is common knowledge to most of us. It would have been an act of justice if the authorities had granted some kind of compensation for the enforced inactivity of a body of men who perform most valuable services and have had their chance of earning incomes destroyed without being relieved of their duties or responsibilities. Had they been among the ranks of those whom we euphemistically entitle "workers" we may be sure their claims would have been considered before or after a strike, but being professional men of high qualifications, they have suffered without hope of redress.

Wages after the War.

We doubt whether some of the somewhat dismal prophecies as to the wholesale increase of the cost of living after the war will be justified in fact, though admittedly we are not likely to return to the prices generally prevalent before the war. Present values have arisen through a number of reasons. Firstly, we have had in the main to depend on what we could provide ourselves, and in the case of imported goods those goods have had to bear the cost of inflated freights. Secondly, the machinery of distribution and allocation has in many cases "stuck" for a time, causing local shortage, which has often had its effect in forcing up prices. Thirdly, whatever labour has made has had to bear the cost of the greatly increased wages paid, often with no increase in the ratio of production.

The two first of the reasons will be eliminated when peace conditions prevail, and as to the last we believe that labour will generally have to face the alternative of accepting wages less than the standard obtained during the war, or alternatively to agree to the adoption of measures which will largely increase output and so justify the war rate of wages.

Rural Housing.

An excellent and most timely article on Rural Housing appears in the last number of "Country Life," which pours judicious ridicule on the grandiose schemes for rural housing which have become so frequent a feature in political dissertations. It is pointed out that a country impoverished by war and the huge incidental burden of taxation is in no position to provide the £125,000,000 to £190,000,000 additional expenditure which would be the cost of the schemes proposed, in addition to which there is a large amount of costly work in connection with roads, drains and bridges which must be coped with. The writer makes the suggestion that the problem should be split up into its component parts and then solved on a businesslike basis. The roadmen employed by the District Councils should, if necessary, be housed by those authorities, who would adjust the wages paid if they provided accommodation in addition. Then the rural houses used by "week-enders" should revert to their original purpose, and the farmers and other employers of local labour be made responsible for the housing of the permanent labour employed by them. This would be no hardship to a class of men who have coined money during the war and who look forward to doing well in the future, while they like the local authorities would take the accommodation provided into consideration in fixing wages. The writer says that the overcrowded village is usually a consequence of the ill-housed farm, an assertion which is probably perfectly true. If the problem were dealt with on these lines there would be little need for the heroic measures so dear to the enthusiastic politician who shows his practicality chiefly in the means he takes to secure the right to add to his other honours the sacred letters "M.P."

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COTTAGES ON THE ANNAN ROAD

COMING TO LIFE.

THE present condition of Europe may be likened to a vast cataract daily increasing in volume and momentum by the dam against which it is forcing itself.

As soon as the obstacle is removed the flood will expend itself with great violence over the whole face of the Continent, and unless controlled and directed into the proper channels may dissipate itself in unexpected directions with undesirable results.

The colossal mass of labour now enslaved by the Arts of War may when released waste its whole force in fruitless efforts and aimless struggles with contending forces unless controlled and directed with wise and far-seeing ability by proper inducements into the right channels.

The relative claims of Agriculture, Forestry, Mining, Shipping, Transport, Building, and the key industries have each to be weighed and allotted, and the old dissipation of labour on luxury trades has to be diverted into productive channels.

Only by this means can we hope to reduce the prices of necessaries, for all labour expended on luxuries being drawn from the production of necessaries tends to raise or maintain their price.

Left to itself we should probably find too great a tendency towards emigration or towards small farming or possibly to resume our system of small shopkeeping (a great deterrent to production), or to go back to useless trades and the manufacture of things we can do without.

To prevent this continued control seems to be essential.

This control could be exercised either by a system of licences, or by regulating the labour of men as they are released, or by special inducements offered. First we are to have the fostering of the "key" industries—Glass, Dyes, Chemicals, &c.—but it seems very doubtful whether if we have to do this and at the same time to maintain our supremacy as before in the Engineering, Textile, and other trades, we have sufficient resources in labour.

Some allowance must be made for the dilution of the labour market by the employment of women. When we hear of a cement works run almost entirely with women's labour, the only men remaining being foremen, engineers and rotary kilnmen (Board of Trade Labour Gazette, August, 1918), we can realise what this means. The figures showing the relative numbers of insured males and females employed during July are startling, viz.:—Men, 2,629,012; women, 1,292,872. In the building and construction trades of course this proportion does not hold, there being only 7,631 women against 576,098 men, but the employment of women on concrete, painting, glazing, fitting, &c., is only just beginning, and may possibly increase.

We cannot assume all these women will remain in their present occupations, though doubtless a large proportion will do so.



GRETNA: GROUP OF STAFF HOUSES.

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We also have to reckon the surplus labour involved by the abandonment of the superfluous trades which will probably take place, such as cheap jewellery, "fancy goods," perfumes, &c.

But against these two factors there is the imminent prospect of our having to maintain more than one occupation army in the countries defeated. These will absorb a great many of our men even if America does undertake the larger share of this work.

Before the war the number of men engaged in the building trades was approximately 1,100,000. Last July it was 583,729.

After the war, allowing for casualties, emigration, &c., we cannot safely reckon upon more than 850,000, and at first probably not more than 750,000.

With this reduced number we have to face a stupendous amount of work. We have the accumulated urgent repairs of five years on all the buildings in the country, the inevitable renewals of dangerous structures, the arrears of new houses required, also of schools upon a more liberal basis than before, the completion of the large number of uncompleted buildings, the fulfilment of the numerous suspended contracts by lessees who had signed building agreements, and the repair of practically the whole of the roads. In addition to all this there will be the adaptation of the present munition factories to their new purposes. Sir Edward Holden in his speech on the amalgamation of the London City and Midland Bank with the London Joint Stock Bank on the 13th inst., said that it had been estimated that at least 300 millions would be required merely for the purpose of re-establishing our industries. If we add the aforesaid obligations the total would certainly be more than doubled.

Assuming that half this sum goes in wages and that each man receives an average wage of £4 a week that would mean about 2 years' work, but there will be delays, waiting for negotiations, and for raw materials, also for labour adjustments, and it is quite conceivable this period might cover 3 years.

It may be confidently predicted that the effect of this great dearth of labour upon prices will be to maintain the present figures for a considerable time. This is now over 100 per cent. above pre-war prices. These are determined by the cost of living, and that in its turn largely by our shipping and transport facilities.

While war conditions last it is proposed by the National Federation of Employers that licences to build shall still be necessary but not priority certificates for materials, and to remove the tendency to do nothing on the part of employers which is attributable to the excess profits duty it is proposed that profits should be limited. By this means every contractor would be certain of securing a proper remuneration for his services. These licences will probably continue until national demands are satisfied.

Conditions will be affected by the following factors, viz.:—Demobilisation, improvement of shipping facilities sufficient to remove the restrictions on imports, the cessation of building licences by the fulfilment of national requirements, and, lastly, the state of the money market.

These will probably cause three distinct periods, each varying from the other, in respect of the cost of building work.

1. The period between the demobilisation and the removal of restrictions on imports.

2. The period between the date of imports unrestricted and the removal of restrictions on building.

3. The period following these events.

During the first of these periods lasting possibly one year or 18 months it may be expected that the cost of building will remain much as it is now, as the cost of living cannot be expected to fall while imports are restricted into the country; the competition to get food between all the countries of Europe which have starved for so long will tend to keep prices at the present level.

It does not follow of course that the satisfaction of national building needs will be simultaneous with the unrestricted imports of food. The greater urgency of the latter and the universal acceleration of ship-building may be expected to give us the food ships first.

The second period, which according to our forecast of the time required to satisfy national needs, viz., 3 years, would therefore cover about 18 months. During that time no doubt great pressure will have been put upon the authorities to widen the limits of what may be defined as national work, and if successful, this must tend to lengthen this period.

The cost of building during this period will of course vary, war bonuses will be lifted one by one (intervals of four months for consideration of wages are suggested by the National Federation), prices of materials will recover slowly, and we may perhaps look forward to a reduction of as much as 50 per cent. by the end of this period.

After the expiration of these two periods, when everyone may do as they like, a new phase will be entered and the law of supply and demand will have free play, and it would not be surprising if the bids for priority to get work done, which has been delayed so long where continued delay would involve very heavy losses, should induce many employers to offer prices having little relation to the actual value at other times.

Such a condition might cause prices to advance almost to present rates if not beyond them.

It is impossible to predict how long such a period would last. It would largely be regulated by the whole economic position, and that in turn would be settled by the success which attends the effort to stimulate production by bringing employers and men into closer touch and understanding, so that there may be no more cutting of piece-work rates on the part of employers, and no more limitation of output by the men.

Socialistic forces will play their part and there may be a stiff fight to establish the absurd theory of the equality of men.

The Report of the Departmental Committee appointed by the Board of Trade to consider the position of the building and engineering trades after the war endorses the unanimous complaint of employers as to two things.

1. That at present the workman deliberately restricts output.

2. That the trades union rules class much unskilled work as skilled.

And as to the first they think the causes are twofold, viz.: that certain classes of labour believe there is only a certain amount of work to be done and that it should provide employment for as many as possible, and also that the less superior powers of production of their older fellow workmen should not prejudice their position. Loyalty to their unions dictates this conduct. The Committee think the first idea is fallacious, and that one of the lessons of the war is that there will be more work to be done than people to do it.

As to the second the suggested remedy is the institution by statute of fixed minimum district rates, as in the coal mining trade. They think that to enable an expert workman to earn during the best years of his life the maximum possible wages, *piece work* or a *bonus system on time work* should be the basis of all employment. Then on this condition and provided that the introduction of automatic and other most recent machinery is freely adopted they consider it will be possible to maintain for both skilled and unskilled labour *a higher rate of wage* than that paid prior to the war. This permanent increase was assessed by Mr. E. Selby in a paper read at the Surveyors' Institution at between 25 per cent. and 30 per cent. In our opinion it will be five years at least before this level is reached, if at all.

There is another element which may possibly offer a solution and reduce these delays. We refer to the possibility of the importation of more labour from China, especially for unskilled work. These men, of which there are 50,000 now at the Front, are doing excellent work, and are receiving 35*s.* a month in addition to their keep. It could only be permitted on emergency grounds, but no one can deny that description of the position for some years to come.

HENRY J. LEANING, F.S.I.

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ROYAL NATIONAL EISTEDDFOD HOUSING COMPETITION.

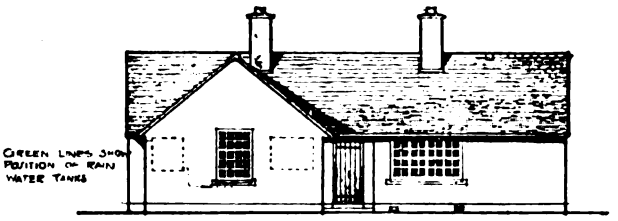
THE winning designs in this competition have reached a very fair average of merit. The design submitted by Mr. J. Austin Laird for rural workers (Class A) is well planned and direct in its lay out and completed with outbuildings for poultry and pigs. The latter, presumably to save space, are accommodated with a coop over the pig-sty. The elevation is well proportioned.

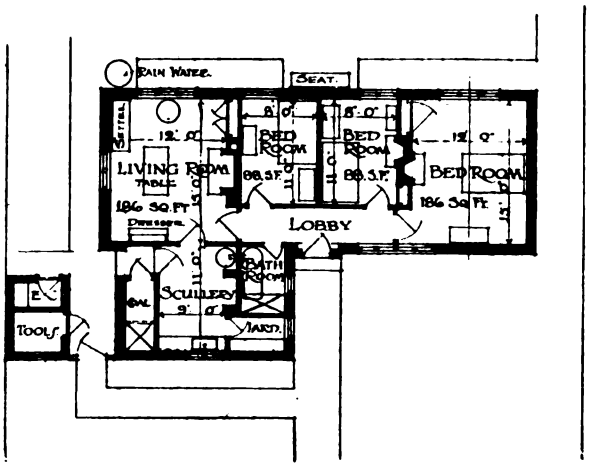
Mr. H. Heathman sends a design for four cottages for South Wales (Class B), showing a group in which the end houses are slightly tilted forward, an arrangement which gives space in rear which is rather well utilised for a bathroom, but the internal coal cellar which can only be filled through the scullery is objectionable. The planning is on the whole good but a little over ample in places.

In Class C for Labourers' Cottages in Anglesey the prize is divided between Mr. J. Austin Laird and Mr. E. D. Blacker, who sends a good and simple plan which we rather prefer to that submitted by Mr. Laird.

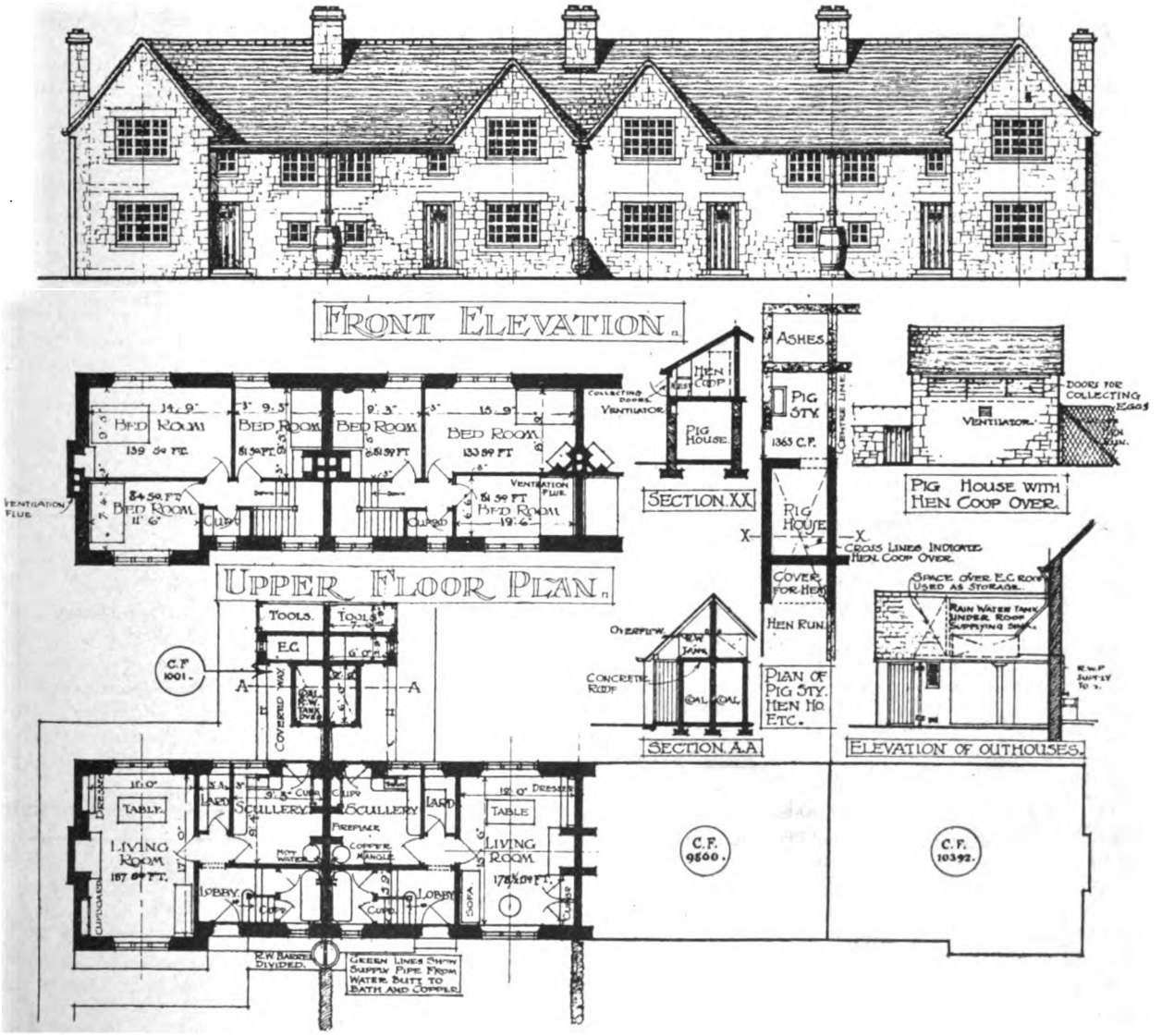
Messrs. Thomas & Morgan win a prize for a design for living-in quarters, and Mr. Herbert North a consolation prize. Both of the prints which have reached us are too blurred for purposes of reproduction, but we can see that Mr. North, who is a clever designer, has hardly done himself justice.

Taken as a whole and considering the inadequate premiums offered the designs submitted to which prizes were awarded are distinctly good.





LABOURERS' COTTAGES, ANGLESEY.
Design by J. AUSTIN LAIRD.

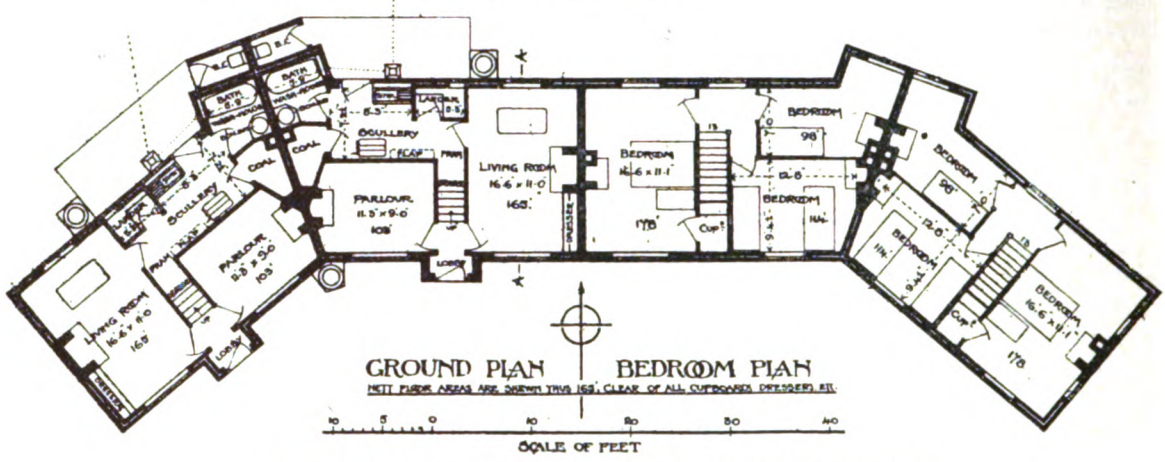


HOUSES FOR RURAL WORKERS, CLASS A.—J. AUSTIN LAIRD, Architect

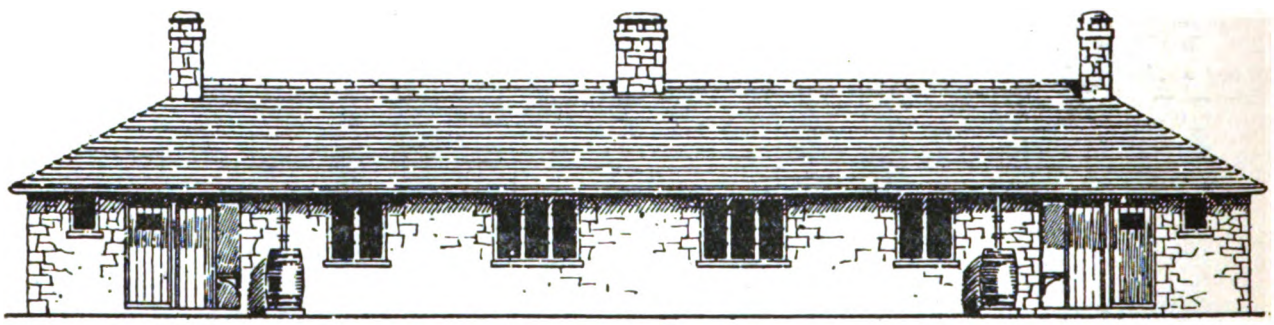
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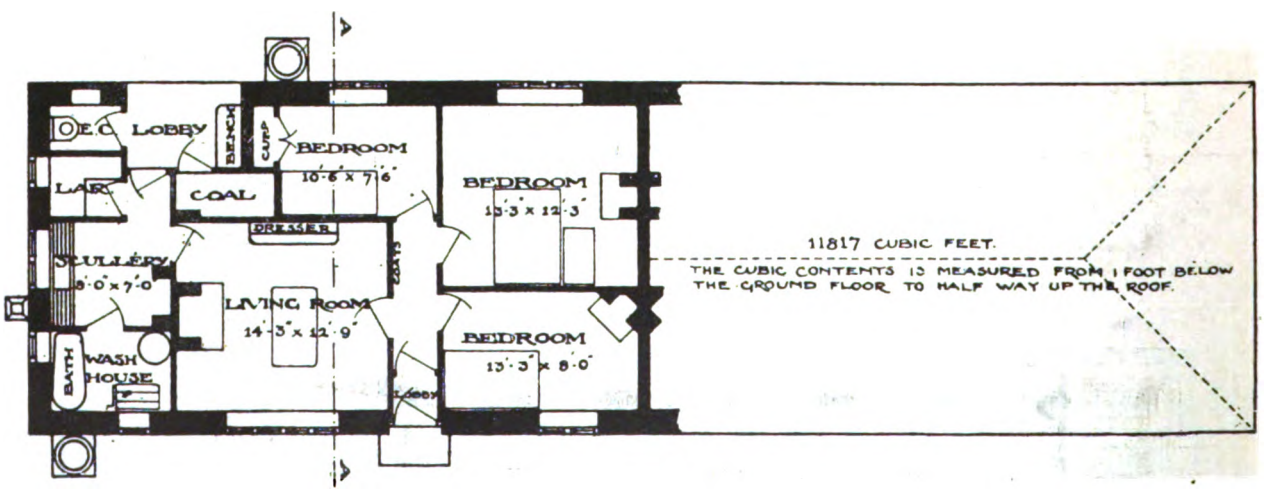
FRONT ELEVATION



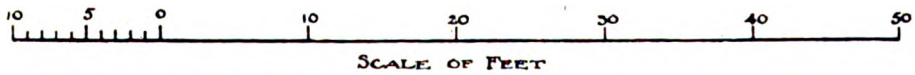
FOUR COTTAGES, SOUTH WALES AREA.—H. HEATHMAN, Architect.



BACK ELEVATION.



PLAN.



DESIGN FOR LABOURERS' COTTAGE, ANGLESEY.—E. D. BLACKER, Architcet.

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Monthly Housing and Town Planning Review.

An Interesting Housing Competition.

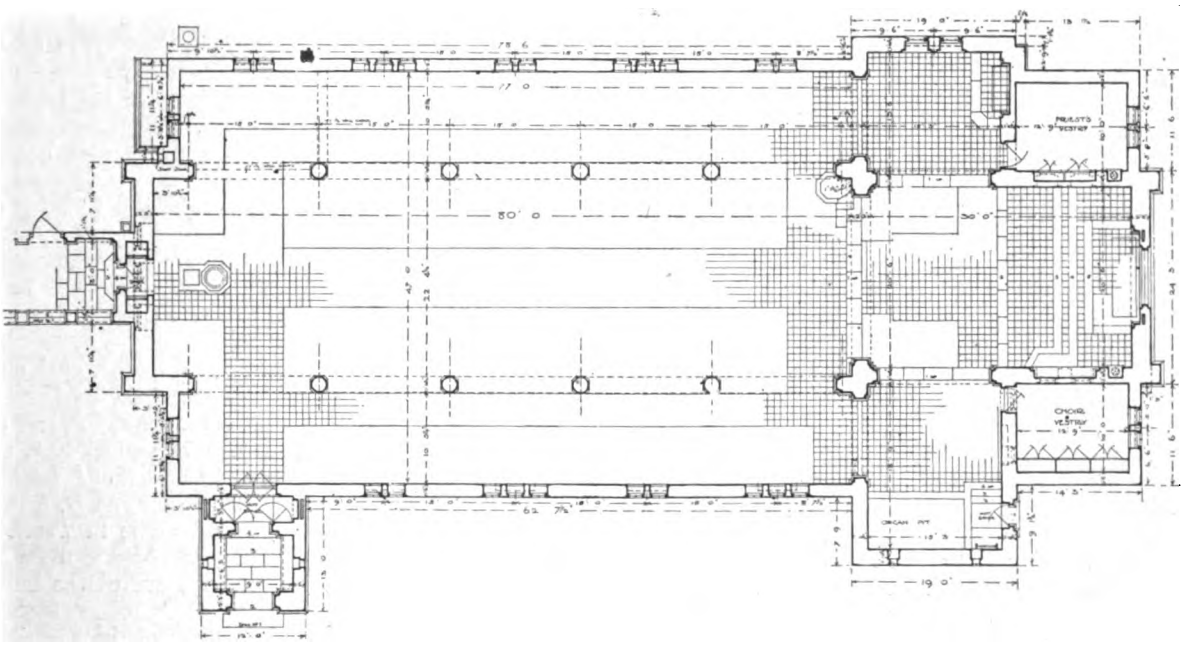
THE Institute of Scottish Architects, which has given ample evidence of energy and quickness to adapt itself to the present needs of the architectural profession, has drawn up a scheme for a great housing competition, with a view of placing at the disposal of local authorities the best data on the subject obtainable. We believe this scheme has now been approved by the Local Government Board for Scotland, and will briefly summarise the scope and character of the conditions proposed.

The competition, which is divided into three sections, is open to any British subject. The first two sections are for lay-out plans, together with types of houses; the third is for cottages in rural areas without a lay-out plan.

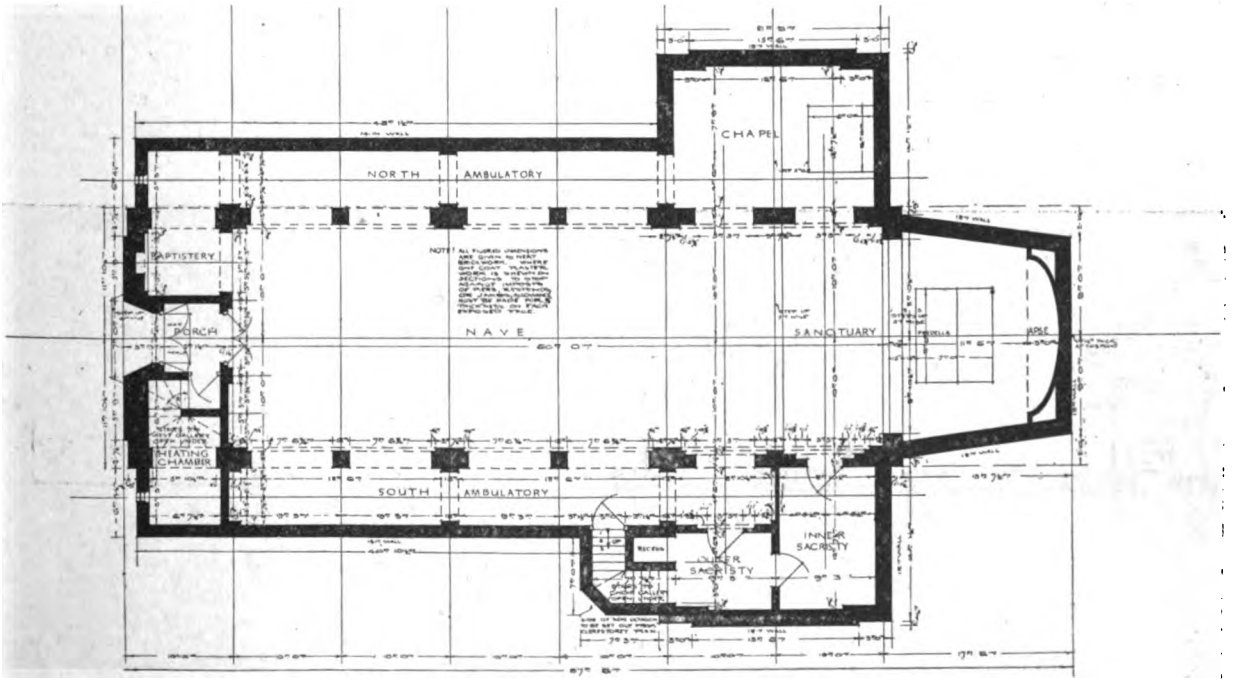
The selection of designs will be made by a committee of five, of which three, Sir John Burnet, Messrs. A. N. Paterson and J. M. Peddie, have been chosen by the Local Government Board from a list submitted by the Scottish Institute, and the two remaining members, Professor S. D. Adshead and Mr. James Thomson, from among persons having special knowledge of town planning.

A panel of architects will be formed from among those submitting designs, and this list will be furnished to local authorities preparing housing schemes, with the recommendation that architects on the panel should be employed by them.

The Board will add to the names thus selected the names of architects whom they consider specially qualified who have not taken part in the competition because they have been serving with H.M. Forces or for other good



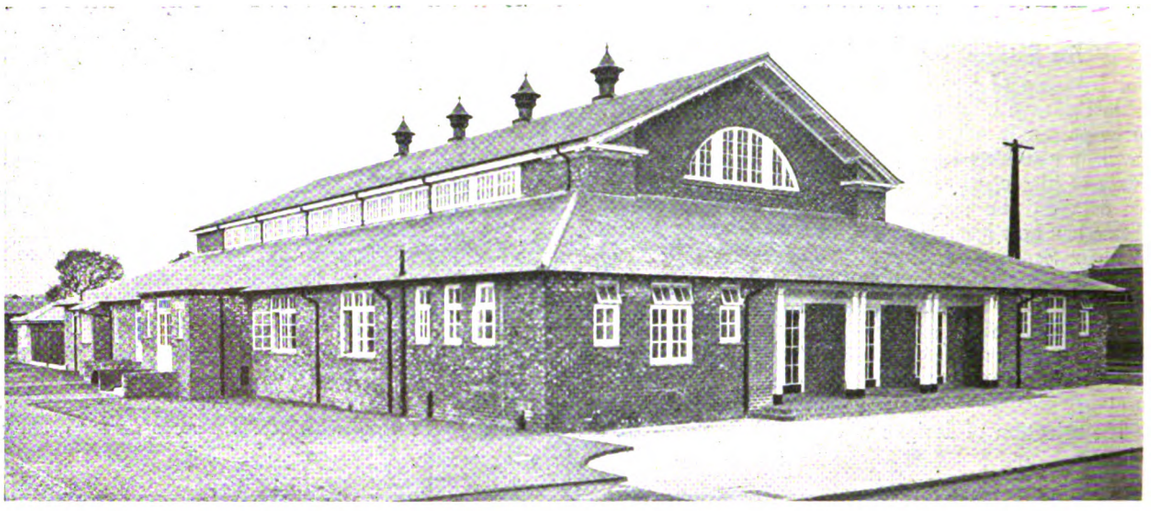
EPISCOPAL CHURCH, GRETNA



GROUND PLAN

ROMAN CATHOLIC CHURCH, EASTRIGGS.

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GRETNA: THE BORDER HALL

reasons. Premiums to the value of £725 will be awarded in the competition.

The Local Government Board may publish those designs to which premiums are awarded, and with the consent of their authors other designs submitted.

In *Section I.* premiums of £125, £75, and £50 are offered for the lay-out of a housing scheme in a given area with houses shown in block, with plans of houses A, B, C and D, which shall have the following accommodation:—

A. Living-room, scullery, and three bedrooms in two storeys.

B. Living-room, scullery, and three bedrooms in two storeys, but one bedroom to be on ground floor for use as a parlour.

C. Living-room, scullery, parlour, and three bedrooms in two storeys.

D. Two-storey flats, each house to have living-room, scullery, and two or more bedrooms, each house to have an independent entrance, stairs being covered.

Type A to be designed with an internal measurement not exceeding 17′ 0″ between party walls, an alternative design with wider frontage to be submitted.

A, B and C to be designed in pairs or blocks not exceeding eight houses per block.

D to be designed in blocks not exceeding four houses per block.

Section II.—Premiums of £100, £60, and £40 for the lay-out of a housing scheme of tenement houses shown in block with type designs. Two types of houses to be provided:—

A containing living-room, scullery, and two bedrooms.

B containing living-room, scullery, and three bedrooms.

A block shall contain two different types of houses, buildings restricted to three storeys, any number of houses in each block to twelve. No staircase shall serve more than two houses on one floor. Adequate washhouse accommodation, drying greens, front and back playgrounds, and children's playgrounds to be provided.

Section III.—Premiums of £40 and £25 for designs of a cottage of one storey containing living-room, scullery, and two bedrooms.

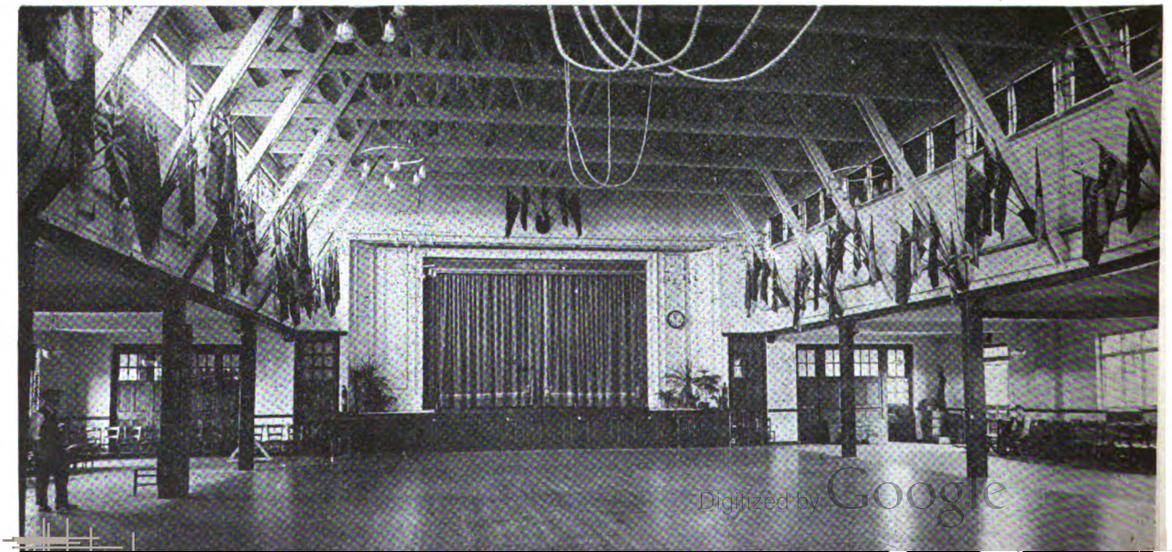
Additional Premiums.—A sum of £210 will be divided into additional premiums as the committee of selection may direct.

General.—All houses to have a larder, coal store and cupboards, hot and cold supply to a fixed bath and a w.-c. The bathrooms may contain the w.c. Floor area of principal bedrooms not less than 160 super feet, smallest bedroom not less than 70 feet. In *Section I.* lower rooms 8′ 6″ high; upper rooms 8′ 0″. In Type D, 8′ 6″ high. In *Section II.*, A and B, 9′ 0″ high; in *Section III.*, 8′ 6″ high.

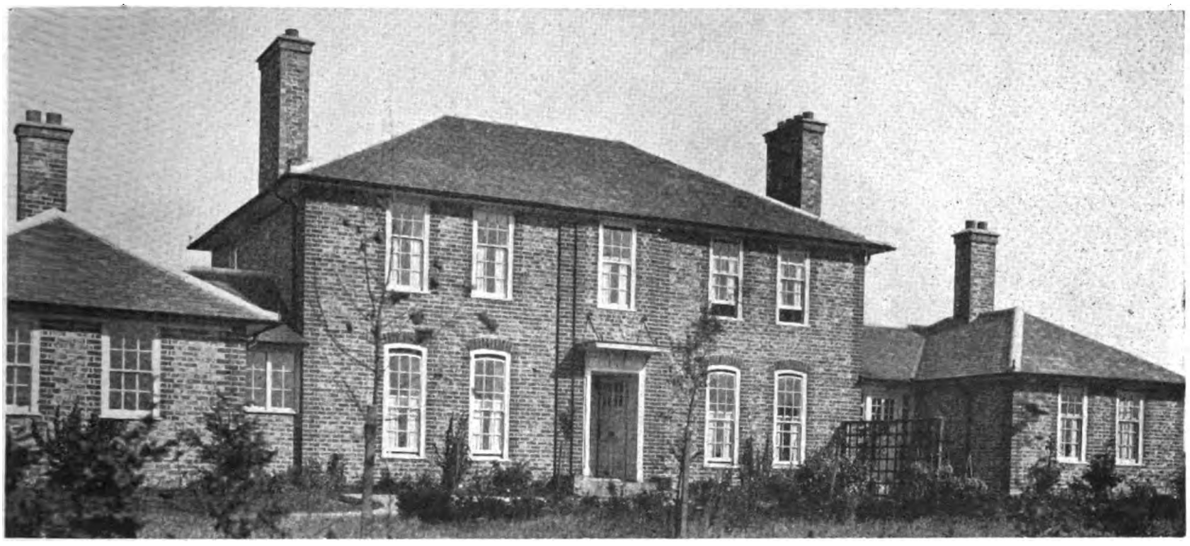
The provisions as to drawings are of the customary character.

On application to the Secretary of the Scottish Institute, 128 George Street, Edinburgh, intending competitors for Sections I. and II. will receive a plan or plans of selected areas, with contour lines and surroundings shown on which competitors shall base their schemes. Two-storey cottages to be 10 to an acre, two-storey flats 14 to an acre, tenement houses 24 to an acre.

Competitors will find it as well to consult the memorandum of the Scottish Local Government Board on Working Class Housing (price 1s.), to be obtained at H.M. Stationery Office, 23 Forth Street, Edinburgh, or Imperial House, Kingsway, London.



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GRETNA: DOCTOR'S HOUSE AND SURGERY.

HOUSING AND RECONSTRUCTION WORK IN ANGLESEY.

WHEN the R.I.B.A. organised the Cottage Competition for England and Wales it was rather felt that the latter country had, as usual, suffered from being linked to its greater and more urban neighbour. It is true South Wales was given an area to itself, and its special type of mining cottage received due attention; but the greater part of Wales, especially the middle and north, is predominantly rural, and the official competitions took no particular note of rural requirements.

For this reason the general committee of the National Eisteddfod held a competition at their meeting this year, asking for three types of house containing a living room and three bedrooms; a parlour, living room, and three bedrooms; and a special type—entirely or mainly on one floor—suitable for Anglesey.

We do not propose for the moment to say anything more about the cottage designs which were awarded the premiums, but to deal chiefly with the exhibition of them which was held at Llangefni, Anglesey, on September 19-21. This was the first of a series that the Welsh Housing and Development Association (who has charge of the plans for the Eisteddfod Committee) intends to hold in different parts of Wales, with the object of bringing these plans directly under the observation of the local authorities for whose benefit they were prepared. It may, therefore, be remarked in passing that a more definite use is already being made of those cottage plans than has been done with those obtained by the R.I.B.A., which, so far, have not received all the support which was expected from their official sanction.

The opening of the exhibition at Llangefni, which was presided over by Sir Ellis Griffith, Bart., M.P. for the Island, revealed several features of great interest to the county at large, and showed that this remote county could teach some of the more sophisticated shires of England a lesson in the way to go about providing new houses after the war. Firstly, there was on the platform Lord Boston, who gave a general description of the objects of the competition, and who is the chairman of a *joint Housing Committee for Anglesey*. The significance of this joint committee can hardly be over-emphasised. It means that instead of six or eight local authorities building each severally their few houses without consultation, the whole Island is combined for a conjoint effort; by this action there is some prospect of the houses being placed where they are really wanted, irrespective of the rival claims of urban and rural local authorities. The extent of this co-operation was not revealed by his Lordship, but we hope that it will include a pooling of any rates occasioned by this post-war housing.

Another and equally momentous step has been taken by the Island. This was mentioned by Sir Ellis Griffith in his opening remarks. Not satisfied with the Local Government Board's method of discovering the number of houses required (by issuing a form for each authority to fill up), the joint committee decided to carry out an independent inevstigation into the housing conditions of the Island. They were fortunate in obtaining the voluntary services of Captain Greville Irby, who has a house on the Straits, and we understand that he has submitted an interim report which reveals a very different state of affairs from what one might gather from the local authorities' returns. Housing in Anglesey, that picturesque summer haunt of thousands of north-country folk, is in a very bad condition, not only as to the number of houses required for its needs, but as to the condition of its existing cottages. These summer visitors have looked upon its whitewashed one-storey cottages as charming and characteristic features of the landscape; in reality, with their mud floors, pitch dark lofts where the children sleep, lack of sanitary appliances, &c., they are every bit as bad as the slums of the manufacturing towns where these same visitors work.

This housing report, we understand, does not base its estimate of the number of houses required on any airy theory, but on a scientific investigation of the needs of agriculture and other local industries, such as quarrying. This is tackling the problem of reconstruction as it should be done, in a scientific, broad-minded way: preceding action by investigation, and fearlessly stating needs before haggling over the cost. No one can deny that Anglesey, if it is to stamp out tuberculosis and to contribute its quota towards the prosperity and food supply of the country, must pull down its worst houses, re-model those capable of it, and build a sufficiency of new cottages.

Professor Abercrombie, who read a paper at the meeting, described the fourfold nature of the problem, each aspect of which must be satisfactorily solved if a complete result is to be obtained. 1. The interior arrangements of the house; 2. The exterior treatment (both practical and artistic) of the house, and position of the garden; 3. The grouping of houses in relation to villages; 4. The Island as a whole. Under the last heading many of those problems were mentioned which can only adequately be dealt with for the whole Island. The water question is the most important of these. Without adequate water supply, as Colonel Stapleton-Cotton, who was present, remarked, no real sanitary advance can be made. In his opinion water should be brought from the Snowdonian mountains, just across the Menai Straits.

Mention must also be made of the work of Lady Boston, vice-president of the Welsh Housing and Development Association, and one of the assessors of the competition, who was largely instrumental in getting it up, and in making the arrangements for this first exhibition in Anglesey. The other assessors were Mr. J. Cook Rees, President of the South Wales Architectural Society; Mr. D. Lleufer Thomas, J.P.; and Professor Abercrombie. We understand that the plans and a report on them are to be issued shortly.

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GRETNA CINEMA HALL.

THE BIRMINGHAM CORPORATION AND PRIVATE ENTERPRISE IN HOUSING.

IN the Report of the Housing and Town Planning Committee of the Corporation of Birmingham presented to the Council on July 30, it was recommended that the following steps should be taken and powers sought to assist housing by means of private enterprise:

1. That the Government's proposals for subsidising Local Authorities' building schemes during the period (estimated at seven years) before the capital valuation can be made, be approved, subject to a proviso that the Government shall relieve the Local Authority of any burden of deficiency beyond the proceeds of a penny rate.

2. That the Government be urged to give Local Authorities further powers for the acquisition of land as previously recommended.

(a) On the lines of the Report of the Committee of the Ministry of Reconstruction; and

(b) With regard to the purchase, allocation, use, and sale of land on the lines set out in the earlier part of this Report.

3. That Local Authorities be given further powers for encouraging, promoting and financing Public Utility Societies—

(a) By Government subsidy during the seven years after the war sufficient to provide an economic return on the capital invested.

(b) By the Corporation advancing loans up to 80 per cent. of valuation.

(c) By all loans being made by the Corporation subject to such conditions both as to the terms of the loan and "lay-out" and development of the estate and other things as the Corporation shall require.

4. That endeavours should be made to stimulate private enterprise by the following means: —

(a) The provision and "laying-out" of building estates by the Corporation.

(b) The lending of money at a low rate of interest for seven years, on the lines before mentioned.

(c) The advantageous purchase by the Local Authority of materials in bulk, for the purposes of resale.

(d) An equivalent subsidy made by the State in the event of rents having to be lowered below the economic rent for national reasons.

(e) The repeal and amendment of legislation which has in the past discouraged private enterprise.

(f) A grant from the State subsidy (say, seven years after the war ends) to meet, in special cases, the whole or part of any serious loss which may be incurred through decrease in the value of houses.

5. That the Government and Local Authorities shall have power to build or subsidise the erection of houses for the working classes and other approved types of houses and buildings.

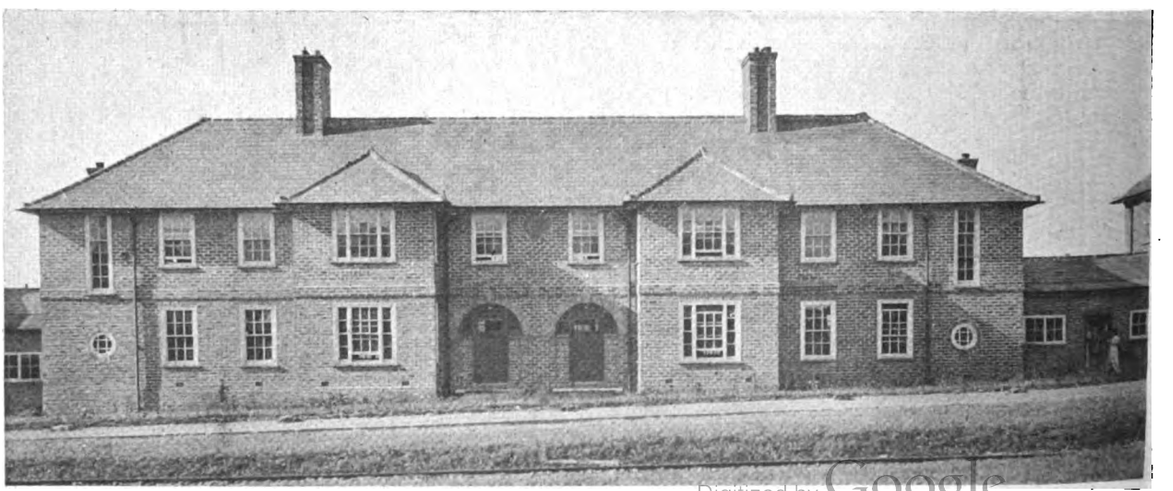
6. That His Majesty's Government be urged to take immediate steps to amend and extend the existing law so as to enable the foregoing recommendations to be carried into effect and for the following purposes, viz.:

(a) The amendment of the Small Dwellings Acquisition Act, and to give power to sell houses, built by the Municipality, to the tenants.

(b) The financing of corporation schemes of housing on the lines now recommended.

(c) Power to prevent the erection of obstructive buildings.

This is interesting as showing the views of the largest and one of the most progressive of our cities on the question of housing by means of private enterprise in the interests of the whole community.

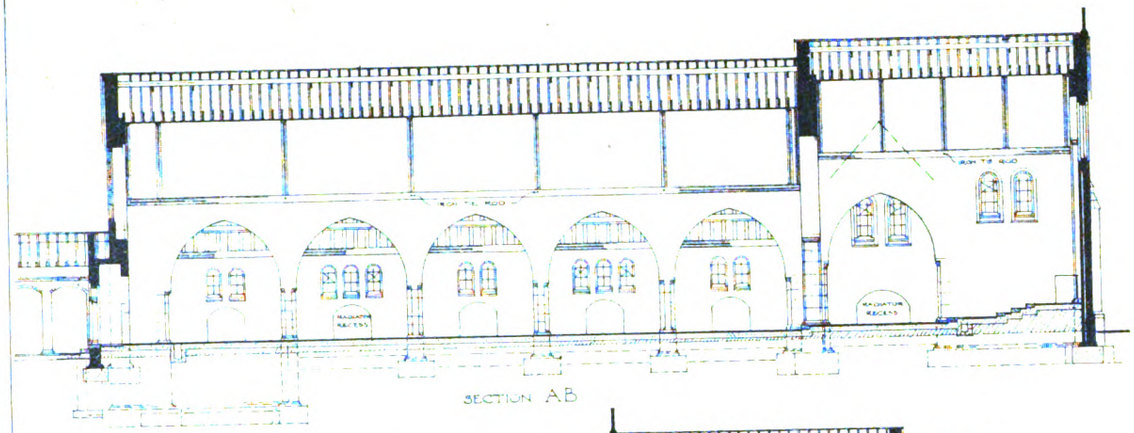


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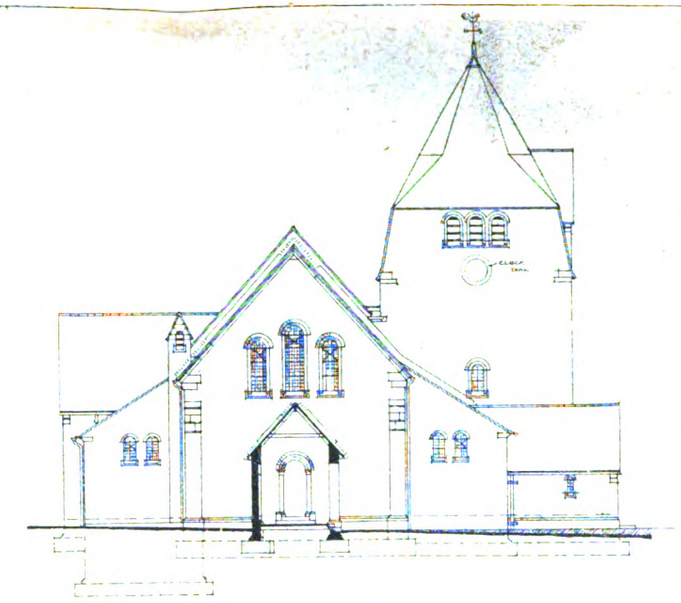
GRETNA: HOSTEL FOR MUNITION GIRLS CONVERTIBLE INTO COTTAGES AFTER THE WAR.

EPISCOPAL CHURCH GRETNA

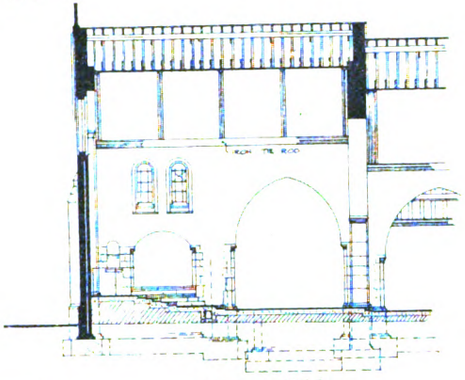
ELEVATIONS



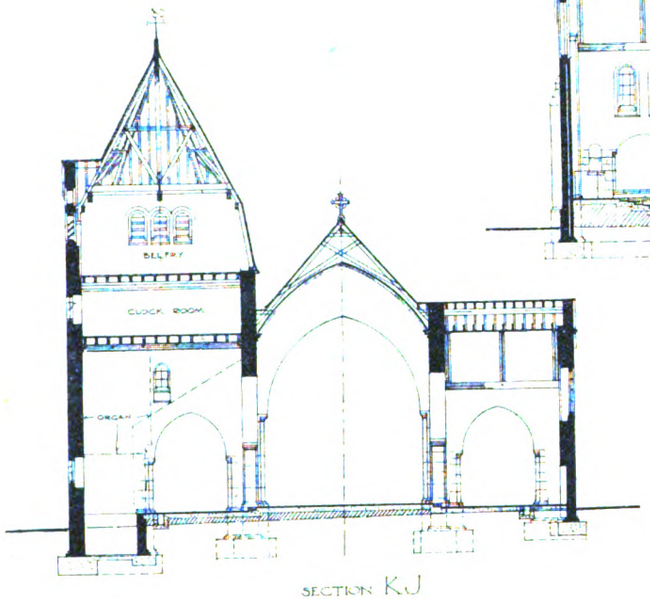
SECTION AB



WEST ELEVATION



SECTION GH



SECTION KJ



SOUTH ELEVATION

PHOTO-LITHO. SPRAGUE & Cº LTD 69 & 70, DEAN STREET SOHO W

The Architect. Sept. 27th 1918.

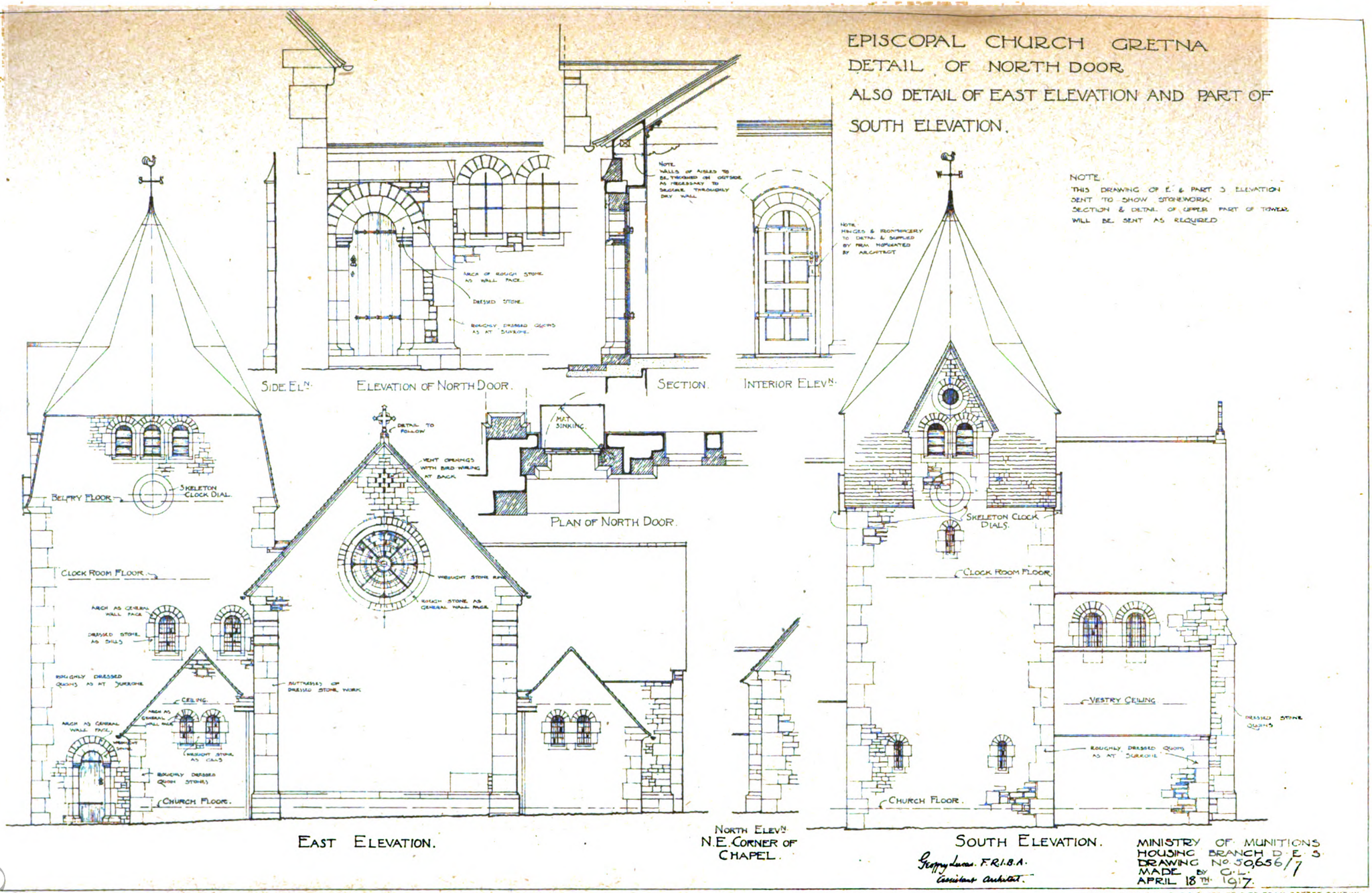
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EPISCOPAL CHURCH GRETNA

DETAIL OF NORTH DOOR

ALSO DETAIL OF EAST ELEVATION AND PART OF SOUTH ELEVATION.



Geoffry Lucas. F.R.I.B.A.
Assistant Architect.

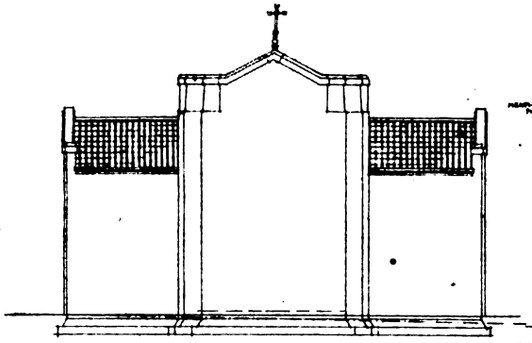
MINISTRY OF MUNITIONS
HOUSING BRANCH D.E.S
DRAWING No. 50,656/7
MADE BY C.L.
APRIL 18TH 1917.

The Architect, Sept. 27th 1918.

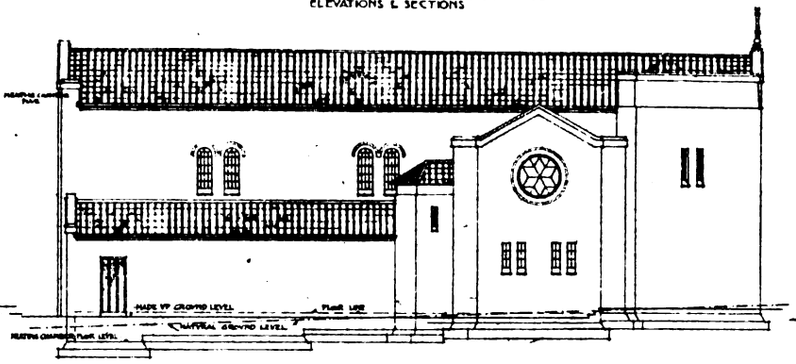
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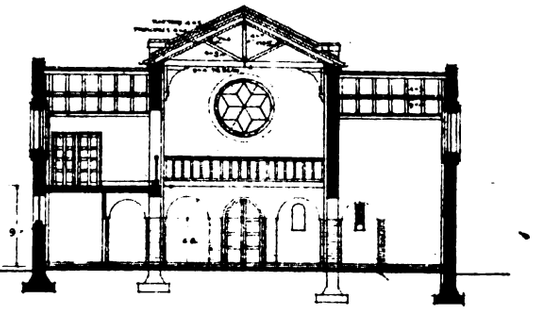
ROMAN CATHOLIC CHURCH EASTRIGGS
ELEVATIONS & SECTIONS



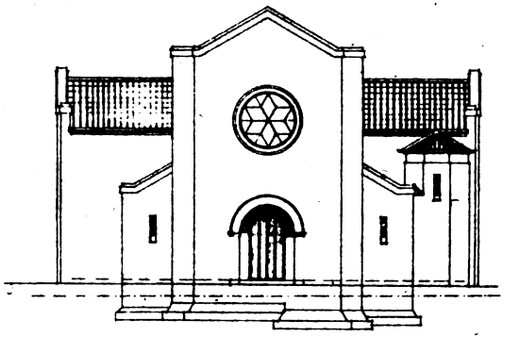
EAST ELEVATION



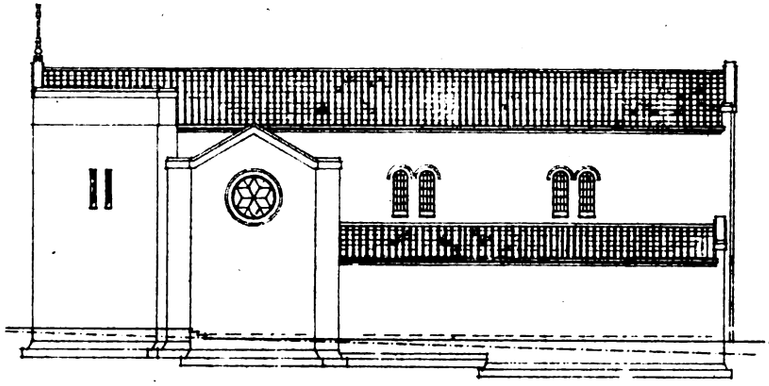
SOUTH ELEVATION



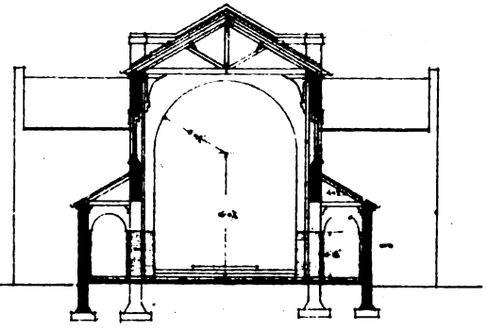
SECTION A·A·



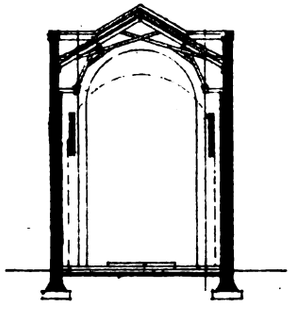
WEST ELEVATION



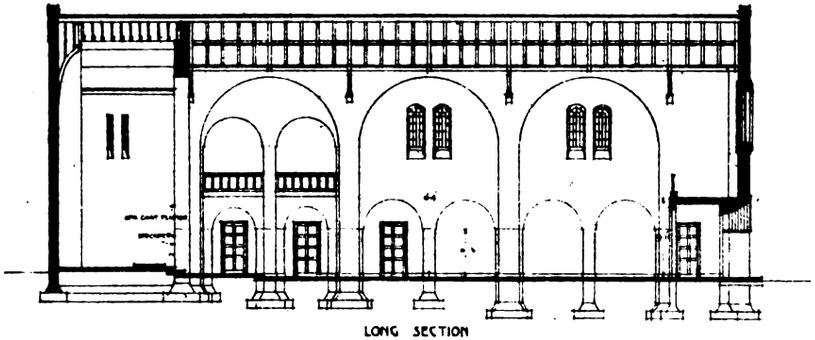
NORTH ELEVATION



SECTION B·B·



SECTION THRO' SANCTUARY



LONG SECTION

NOTE
ALL HEIGHTS & DIMENSIONS REFERRED
ON A BASE OF 4 COURSES = 12" RISE

MINISTRY OF MUNITIONS D.E.S.
HOUSING BRANCH
DRAWING No. 30 /3085/14
PAGE 82
20th NOV 1917

Lockyer Simmons
ASSTT ARCHT

Received Nov 23rd 1917.

The Architect, Sept 27th 1918.

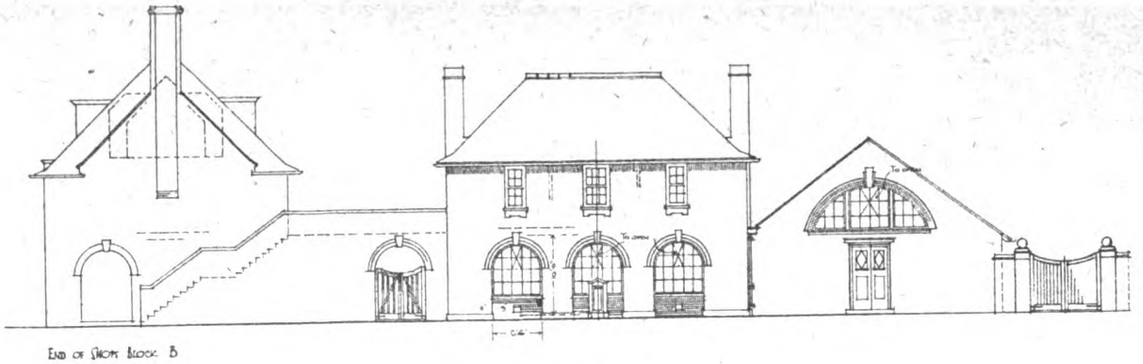
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POST OFFICE GRETNA



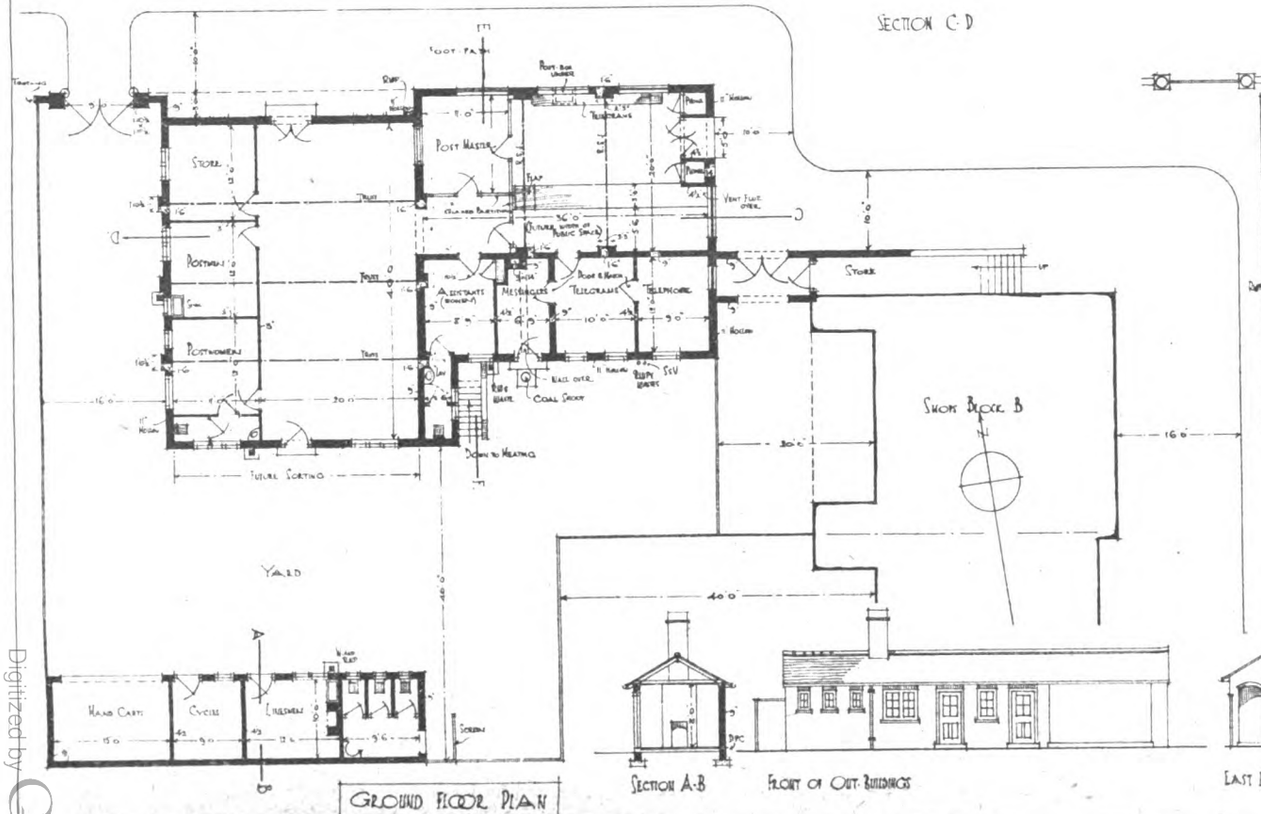
EAST ELEVATION



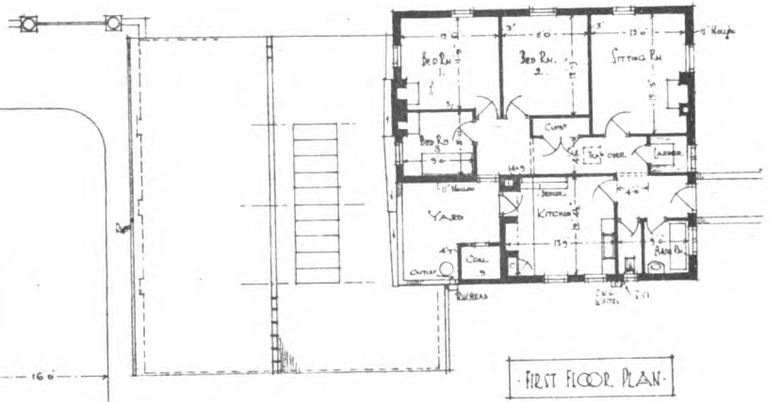
END OF SHOP BLOCK B

NORTH ELEVATION

SECTION C-D



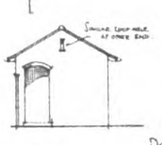
GROUND FLOOR PLAN



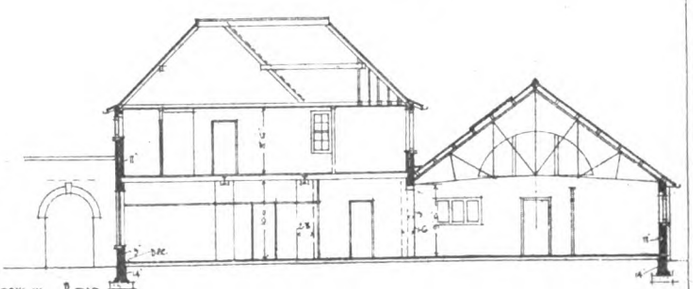
FIRST FLOOR PLAN

SECTION A-B

FLOOR OF OUT-BUILDINGS



EAST END



DORMER ROOF

PHOTO-LITHO. SPRAGUE & Cº LTD 69 & 70, DEAN STREET, SOHO, W.

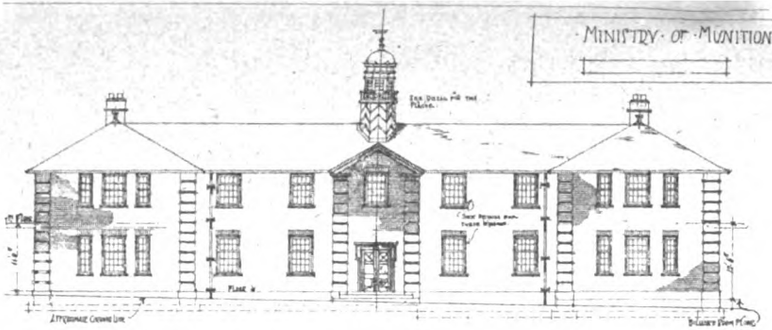
The Architect: Sept. 27th 1918.

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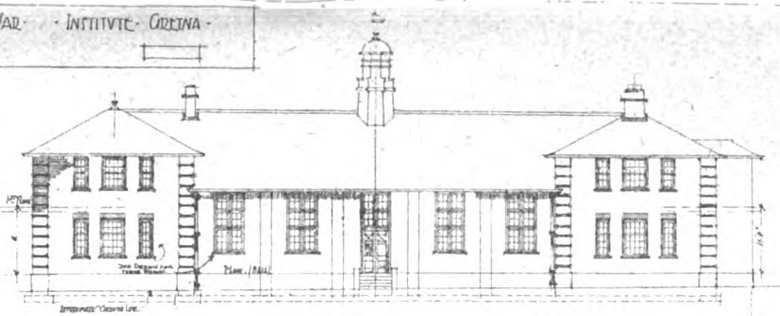
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CALIFORNIA

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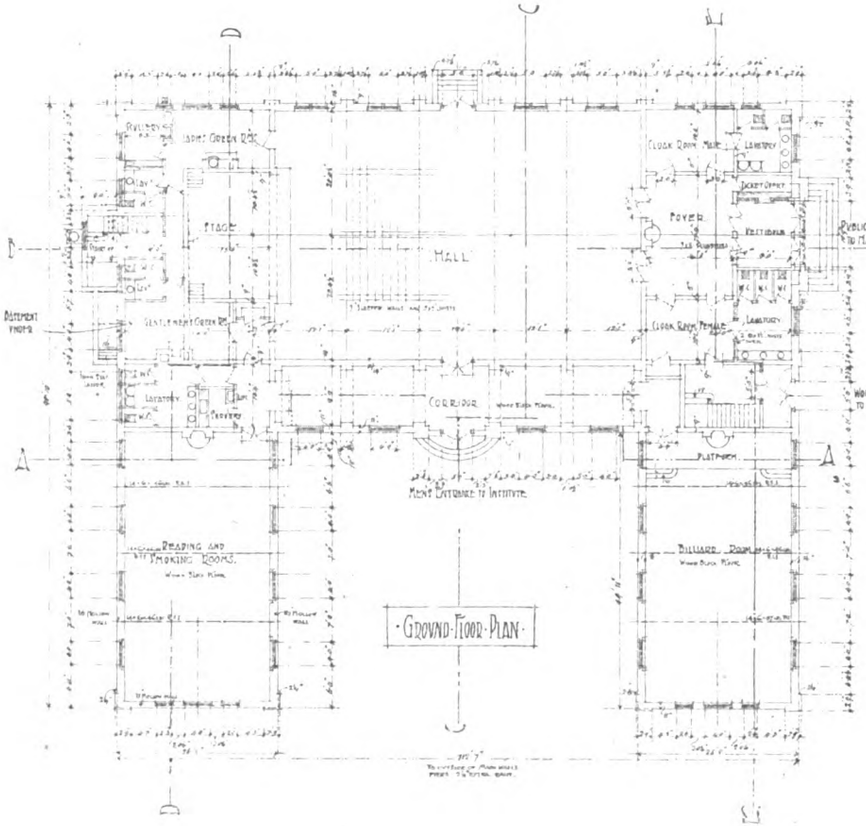
MINISTRY OF MUNITIONS OF WAR — INSTITUTE GRETNA



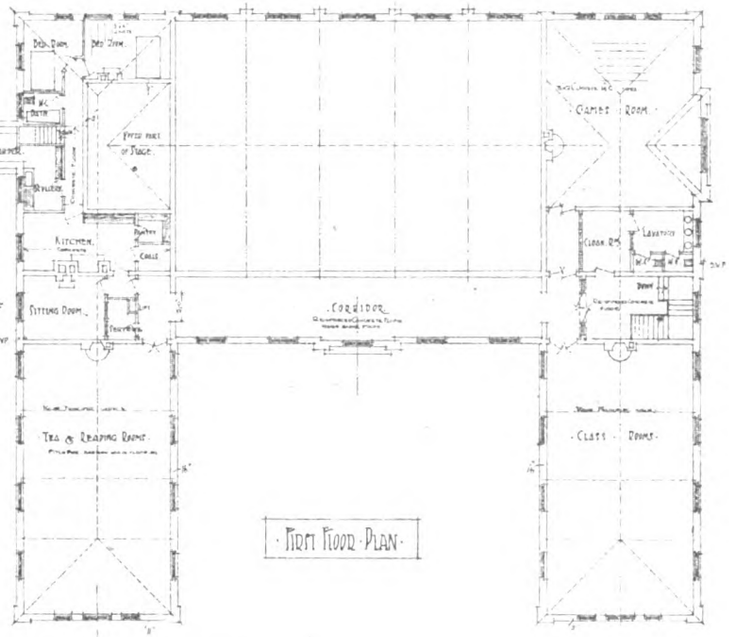
WEST ELEVATION



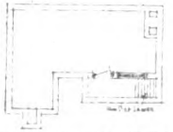
EAST ELEVATION



GROUND FLOOR PLAN



FIRST FLOOR PLAN

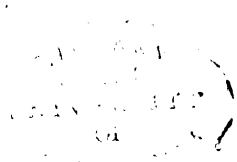


MEETING CHAMBER IN BASEMENT

MEETING SECTION DETS

The Architect, Sept 27th 1918.

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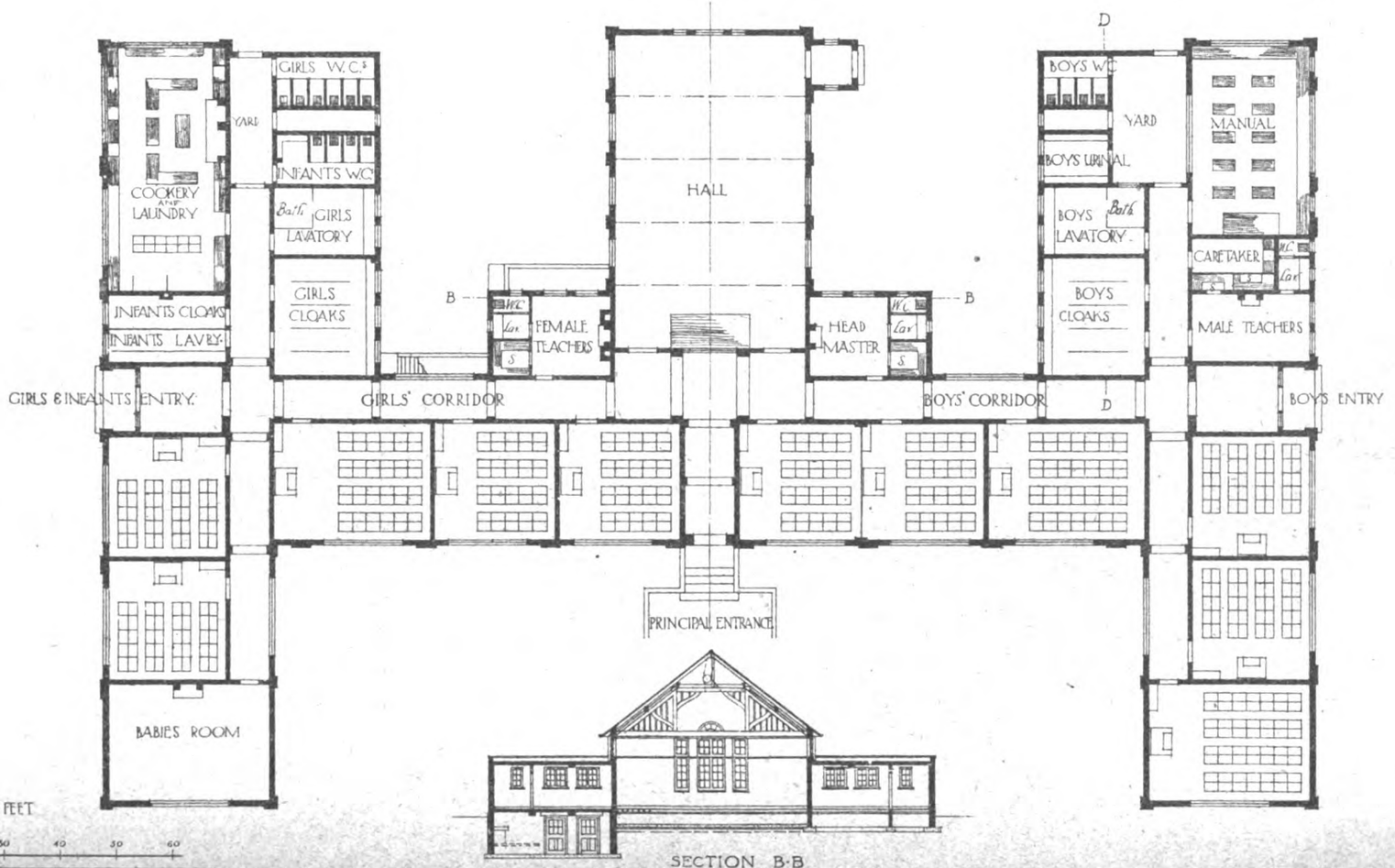


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H.M. FACTORY GRETNA ELEMENTARY SCHOOL.



FRONT ELEVATION (SOUTH)



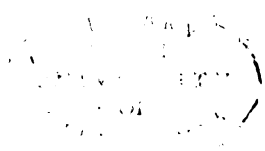
SCALE OF FEET.



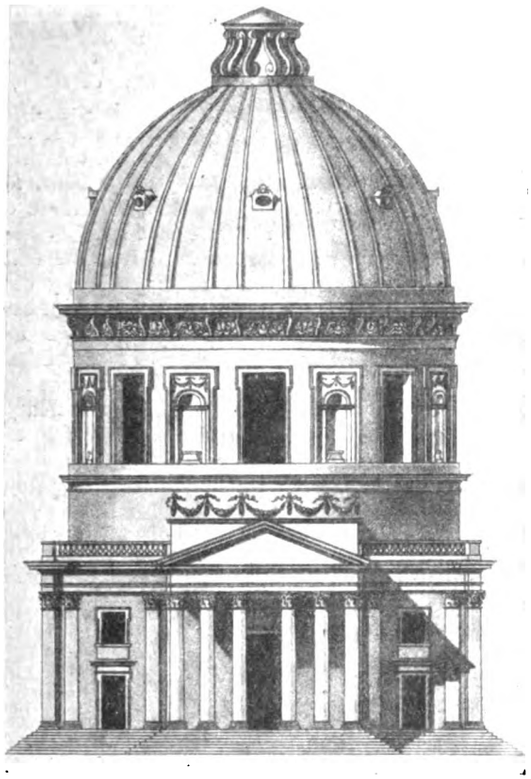
SECTION B-B

The Architect, Sept. 27th 1918.

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PARIS IN 1808.*

NO. 1.—THE CHURCH OF THE ASSUMPTION, RUE SAINT-HONORE.

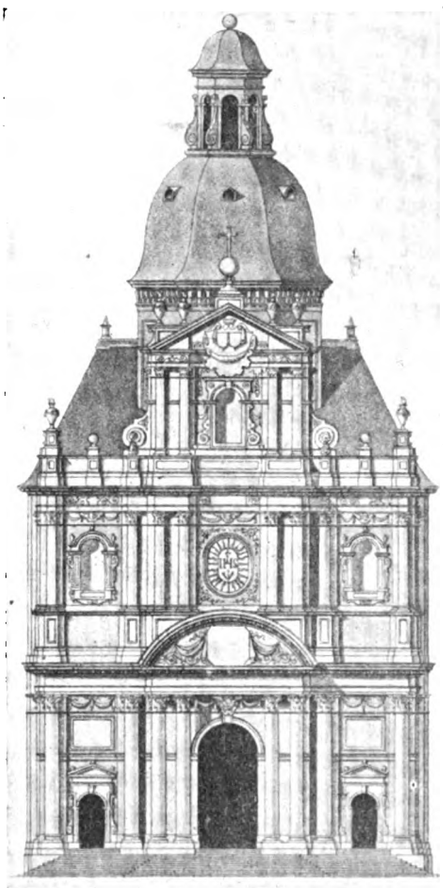
THIS church was built in 1670-76 from designs by Erard, who filled the office of Painter to Louis XIV., and was also the first Director of the French Academy in Rome. It is completely circular in plan, the frontage to the street being formed by a flanking wall tangential to the curved body of the church. The interior was decorated with paintings by Charles de la Fosse.

EXHIBITION NOTES.

THE present exhibition of the London Salon of Photography at the Galleries of the Royal Society of Painters in Water Colours, 5A Pall Mall East, affords one of many proofs that almost anything is possible to the skilled photographer who has elevated photography to the ranks of an art. It is difficult to pick out subjects where nearly all the work reaches a very high level of interest. Among portraits and portrait studies the following are of outstanding excellence: No. 3, "Father Nolan," by Hugh Cecil; No. 11, "Triangulate Design of J. H.," by Edward Henry Weston, being a good study of a head in shade contrasted with a triangular patch of light across the face; No. 33, "Vaudeville," by Edward Henry Weston; No. 36, "The Striped Dress," by Walter Bennington. No. 46 is a delightful study of "Violet Romer," in front of columns strongly reflected in a wet foreground. No. 61, "Miss U.S.A.," a very pleasing study of a Red Cross nurse by Fred Stirling. No. 73, "Miss Gish in 'Hearts of the World,'" by the Hoover Art Company, is a delightful picture. "The Lady Diana Manners," by Bertram Park, is a good portrait in fancy dress. But the three studies by Yvonne Park, 181-183, the first of a figure study of the nude, the second the head of a child, and the third Miss Mimi Crawford, are probably the best things in the exhibition.

Among landscapes and town views we specially noted the following:—No. 39, "Philadelphia," by W. G. Fitz, a misty view of chimneys and tower; No. 71, "Columns by Night," by W. H. Rube, showing the angle of a classic façade; No. 88, "Sunlight and Shadow," by the same artist; four delicately rendered impressions by John H. Anderson, 113-116, entitled "Low-Tide," "Quayside," "Falaise," and "Lynn"; "The Fascination of Low-Tide," by Kate Smith, No. 127; "Lothbury," delightfully rendered by Stephen W. Shore, No. 185; and "The Touch of Autumn," by J. L. Tucker, No. 245. The exhibition also includes two very interesting aeroplane studies, which are official R.A.F. photographs and are entitled "The Realm of the R.A.F., I. and II."

An interesting series of the remaining works of the late Sir Alfred East, R.A., P.R.B.A., in oil and water colour, is on view at the Galleries of the Fine Art Society, 148 New Bond Street, the most notable of which are some excellent water colours, including "The Enchanted Castle," No. 52, "The Grand Canal, Venice," No. 57, a "Lake Scene, Japan," No. 72, the last a delightfully delicate rendering of trees and water. Among other pictures we liked were No. 12, "A July Storm," and No. 4, a strong impressionistic view of Château Gaillard. Even in this comparatively small exhibition of his works the great versatility and variety of the artist's treatment of subjects is very strongly shown.



PARIS IN 1808.*

NO. 2.—THE JESUITS' CHURCH, RUE SAINT-ANTOINE, NOW KNOWN AS ST. PAUL AND ST. LOUIS.

THIS church was built between the years 1625-41 from designs by Derand. The interior is a good example of the Jesuit type, with three apses and an octagonal drum lit by four windows. The church was much admired, and was described by Evelyn, who visited it soon after its completion, as "that noble fabriq, which I esteeme to be one of the most perfect pieces of architecture in Europ." It is an interesting example of the architecture of the epoch of Louis XIII., the link between the picturesque Early Renaissance and the fully developed type of Louis XIV.

* These illustrations are selected from a work on the architectural monuments of Paris published in 1808, since which date many of them have been demolished. The notes generally are from the descriptions given.

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CORRESPONDENCE.

Lady Architects as Church Builders.

Sir,—I am writing a paper on "Architecture as a Profession for Women," and would like to know if any church has been built from the designs of a woman architect.

If you do not happen to know yourself, may I ask if you would be kind enough to publish the query in your journal?—Yours, &c.,

Miss B. A. Charles, A.R.I.B.A.

September 17, 1918.

Municipal Bathing Establishments. Should they Include Turko-Russian Baths?

We have received the following communication from Mr. Mark H. Judge:

The Town Clerk of Folkestone has received the following letter in reference to the recent closing of the Turko-Russian Baths in that town. These baths were long maintained in excellent order by private enterprise.

Highlands, Folkestone:

September 23, 1918.

Dear Sir,—I very much regret to find our Turko-Russian Baths closed, and venture to write to you thereon in the hope that the Borough Council will come to the rescue and take what steps may be necessary to preserve these baths to the town, for a health resort without these baths is like what Hamlet would be without the Prince of Denmark.

As a constant user of Turko-Russian Baths for more than 50 years I know something of their value, and I trust when the attention of the Council is called to the matter they will realise the need for some immediate action in the interest of their constituents.

When a municipality undertakes a public service it should do it thoroughly and for every section of the community; therefore, in the matter of bathing equipment, it would seem to be only right that it should be made complete by adding Turko-Russian Baths to those which the Council have for so many years maintained.—I am, yours faithfully, Mark H. Judge.

THE NEW STYLE HOUSE OF CALL.

We quote the following from an interesting article in the "Westminster Gazette" by Mr. W. A. S. Benson:—

"It is said by those who, in a past it is now hard to recall, frequented cosmopolitan hotels that the low-toned conversation of the British was usually drowned by the noisier talk of other nations, but that if they took to whispering, the English speech was audible all over the room. One is tempted to see a principle in this which may bear upon advertisement; for are not the banks, with their usual restrained architecture, more easily distinguished in our crowded streets than all the gilt lettering of the neighbouring shops? Will not this principle apply to the new style inn, when the victualler of a future now almost present shall vend meat and drink in more equitable proportion than Falstaff's one halfpennyworth of bread to an intolerable deal of sack? In country districts one may see many a tidy new building which suggests that, where space need not be grudged, the problem may, with a hint or two from William Morris's 'A Dream of John Ball,' be an easy one; but great towns present more difficulties. How far, for instance, will trust conditions affect the arrangement of departments on the ground floor? We shall, I suppose, have to supplement the 'jug and bottle' with a 'dish and cover' entrance, but the most striking change will be the emphasis and space allotted to the main stair of access to the refectory which occupies the whole first floor and is the dominant feature not only of the interior planning but also of the disposition of the facade. Perhaps it was a recollection of an old English type of inn with ranges of open galleries that foreshadowed my vision of a transmuted edifice on some familiar town site; though the idea was tried in early days of the Savoy Hotel by Mr. McMurdo in the balconies of the river front; but the experiment was before its time, and fell short of logical completeness. But to resume; externally our ground floor is not unlike that of many bank buildings; there being no need of the wall of glass demanded by adjoining drapers, we seek distinction in solidity. Above the arch head runs a broad band of stone, with the arms, badges, or title of the house wrought into it, but otherwise plain and solid up to the level of the first floor window-sill. Then we come to the characteristic feature of the whole scheme, the gallery front, formed by a double rank of slender columns, not those of the heavy classic orders, but delicate shafts such as delighted Moorish architects, or those which enrich the triforium arcades of our cathedrals, and most profusely decorate that Pisan Romanesque which Ruskin prescribed for our adoption. Inside, corresponding pillars support the ceiling beams, and carry the sense of a pillared hall through to the back, where the front is repeated by another double rank. Of course there is fitted inside these outer colonnades full means of screening out the weather by glazing, but the impression is one of free access to light and air along the full width of front and back; for the columns, which, having an iron core, are even superfluously strong, seem as nothing when compared with the obstructive mass of ordinary brickwork. On the panelling the counters, screens, and other interior fittings we must not linger, though they offer full scope for ingenuity. Nor can we here discuss the best position for the kitchen department. Those who have not tried have no idea for how many weeks of the year roof-gardens may be pleasant resorts, and of what a wealth of leaf and flower they are capable, even when geranium and calceolaria are ruled out as inharmonious; beginning in February with the early bulbs, and before this month is out the almond blossom, on till the chrysanthemum and crimson of autumn vine leaf bring a close in November. We may be sure that as confidence in modern methods of roofing increases, furnishing such gardens will become a recognised branch of the nurseryman's trade, and a fit occupation for the taste of lady gardeners."

We have heard from various sources that among the number of sub-contractors employed on works in connection with the housing scheme we illustrate were the following:—

Ranges and Hot-water Work have been executed by the K.C.B. Foundry Co., Ltd., and by Messrs. Cornes & Haighton.

Cooking Apparatus and Plant have been carried out by the Carron Co., of Berners Street and Glasgow, and by Messrs. R. & A. Main, 25 Princes Street, W.

Laundry Plant has been supplied by Messrs. Braithwaite & Co.

Concrete Work has been executed by Stuart's Granolithic Co, Ltd., and by Messrs. Seigwart, the Kleine Co., Ltd., and by Laing's Fireproof Floor Company.

Messrs. Cornes & Haighton has supplied their "London Yorkshire" low pressure combination fitting, in which a number of their latest improvements are included to many of the cottages built.

The K.C.B. Foundry Co., of 2 Woodstock Street, London, W., have supplied the central cooking range in the central kitchen; the fireplaces used in the institutes of Gretna and Eastriggs, and also the door furniture; the door and window furniture and fittings for the Gretna and Eastriggs schools; the kitchen apparatus, door and window fittings and fireplaces for hostels at Gretna and Eastriggs, and K.C.B. artisans' combined kitchen ranges, copper baths, hot-water services, door and window fittings, and fireplaces in cottages at Gretna and Eastriggs.

Messrs. Mackenzie & Moncur, of Edinburgh, and *Messrs. Taylor & Fraser Munro*, of Glasgow, have carried out heating, hot-water services and ventilating work in connection with various buildings.

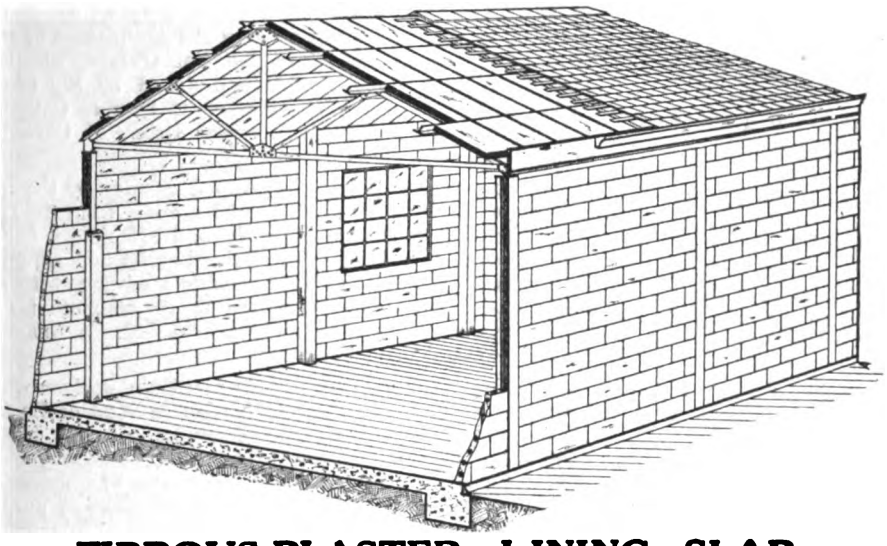
Messrs. Tyler & Freeman, of 40 Chancery Lane, W.C., have carried out electric lighting work.

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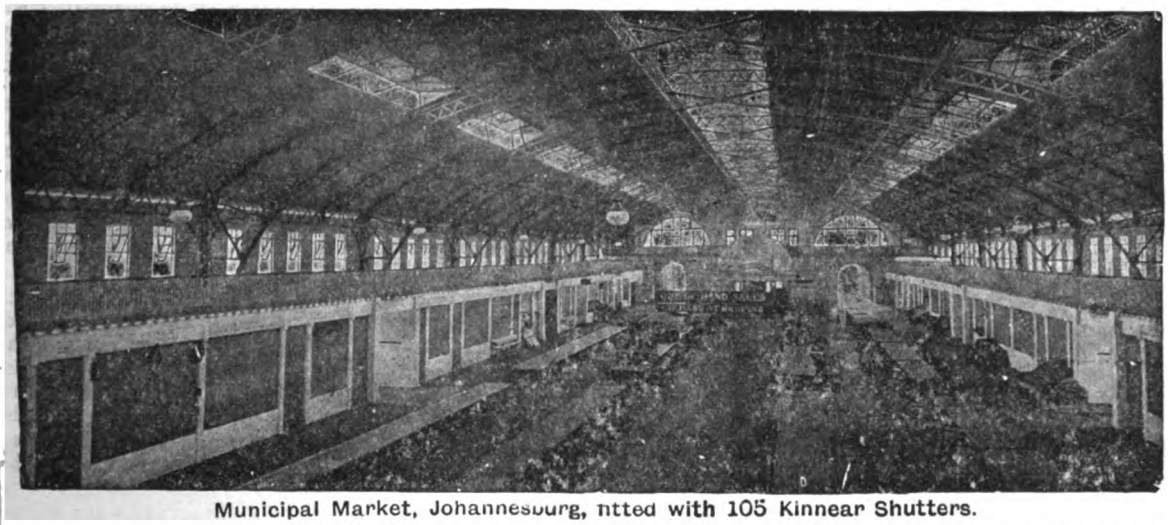
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GENERAL.

HEDINGHAM CASTLE, the remains of the fine old Norman fortress in Essex, has been destroyed by fire.

MR. W. R. HUMPHREY has been appointed surveyor to the Wilton Town Council, Wiltshire.

ON Friday, September 20, the new pumping station at Garrion Bridge, the latest addition to Motherwell's water supply, was formally opened by Major Hausser.

PERMISSION has been granted for the erection of a national kitchen on land belonging to the Bentley Urban District Council.

DAMAGE estimated at several thousands of pounds was caused by an outbreak of fire the last week-end at Lawside Foundry, Lochee, Dundee.

THE death in action is announced of Mr. Charles Taylor Whiteley, A.R.I.B.A., Lieutenant in the Royal Warwickshire Regiment.

PLANS have been passed for the erection of a new meal mill at Cowie for Messrs. R. & J. Dunbar, millers, Stonehaven.

IT is proposed that the war memorial of Christ Church, Croydon, should take the form of the restoration and enlargement of the Longley Road schools at a cost of between £2,000 and £3,000.

THE death in action is announced of Captain J. Algernon Toone, A.R.I.B.A., of the Australian Pioneers. Before joining the army he held a position under the Commonwealth Government at Melbourne.

SERIOUS damage is announced as being caused to the Furness Railway line near Grange-over-Sands, caused by the high tide in Morecambe Bay, the sea washing away the embankment for 60 feet.

ON Saturday night last a serious fire broke out at the wharves of Messrs. Spiller & Baker, Dockhead. The damage caused is estimated to amount to a sum approaching £30,000.

THE death is announced from wounds received in action of Second-Lieutenant Oswald Massey Samson, R.G.A., aged thirty-seven. The deceased officer was the third son of Mr. C. H. Samson, F.R.I.B.A., of Hillmorton Road, Rugby.

THE Newport Housing Committee recommend the Corporation to purchase two sites for the sum of £17,000 with the two mansions known as the Maindee Estate and the Maindee Hall Estate for a housing scheme.

THE Athy Urban Council (Ireland) have decided to proceed at once with the erection of 150 houses in the town for men engaged at the Wolfhill Collieries, provided the Government will loan the money free of interest.

THE Sevenoaks Urban Council have applied for permission to borrow a sum of £50,100 for purchase of land and erection of cottages under the Housing of the Working Classes Act. It is intended to erect at the close of the war 150 houses.

SECOND-LIEUTENANT H. FORSYTH GAMMIE, youngest son of the late Mr. William Forsyth Gammie, architect, and Mrs. Gammie, 19 Jordan Lane, Edinburgh, is reported killed. Before joining up he was engaged in H.M. Office of Works.

LAST week end Mr. H. Tooth, of Hazledene, Woodville, Burton-on-Trent, passed away in his seventy-sixth year. He was the originator of the pottery at Woodville which turned out the art pottery which has been distinguished as Bretby ware.

THE Newport Housing Committee have decided to advise the Corporation to proceed immediately with the erection of 1,000 houses to be erected on forty available acres of land situated on the east side of the river. The scheme is estimated to cost an amount between £400,000 and £500,000.

THE manufacture of concrete barges is proceeding, and last week it was announced that two concrete sea barges were launched, one at Barnstaple and the other at Barrow. The first barge was launched at Poole, to be followed by the two just mentioned, and others are being built at Gloucester and Greenock.

IT is announced that Mr. Geo. Billings, of the firm of George Billings & Co., auctioneers and surveyors, of Blomfield House, London Wall, E.C., has accepted the appointment of honorary architect of a proposed garden city to be erected by the Hackney Foundation Fund for Disabled Soldiers and Sailors.

MR. ROBERT MUNRO, Secretary for Scotland, and Mr. Harry Lauder were among the speakers at the dedication of memorials in the Highlanders' Church, Glasgow, on Thursday, September 19. Mr. and Mrs. Lauder presented a pipe organ in memory of their only son, who fell in action, and Mr. Munro gave a stained-glass window.

BRAYTON, the Cumberland seat of Sir Wilfrid Lawson, was destroyed by fire on Saturday morning last. Many valuable pictures and works of art have been destroyed; some of the furniture and plate has fortunately been saved, but amongst many valuable pictures destroyed were two portraits by Hoppner valued at £5,000 each.

AT the last meeting of the Falmouth Town Council a letter was reported as being received from the Local Government Board stating that they could not sanction a loan under present conditions for housing. A letter had also been received from Mr. R. Barclay Fox that he could not accede to the Council's request to sell land in Arwenack Avenue for the purpose of erection of workmen's houses.

THE war memorial chapel of St. Edward at St. Mary's, Reading, was dedicated last week by the Archdeacon of Berkshire in the absence of the Bishop of Oxford, who is in America. The chapel has been designed by Sir Charles Nicholson, Bart., consulting architect to Lincoln Cathedral, and the contractors Messrs. Wheeler Bros., of Caversham Road, Reading.

ON the question of housing under discussion by the Wellington Rural Council the clerk read a letter from the Local Government Board acknowledging a draft report for the erection of seventy-five houses in the district and approving the proposal, but asking for a complete scheme, with estimates and plans. The surveyor's rough estimate for the seventy-five houses was reported as £22,500. A committee has been formed to select sites.

IN order to provide homes for munition workers within reach of the factory, a firm in the North-West of England is erecting a garden village. The scheme embraces 4,000 to 5,000 houses for the accommodation of 15,000 people, and at present 300 of the former are in the course of construction. There are unenclosed grass spaces for recreative purposes along the front of each block. A church, school, playground, and a refreshment house are included in the plans. The village has already its own farm for supplying milk.

MR. HENRY I. CURRY, of Saltburn, and formerly of Norton, near Stockton-on-Tees, whose death is announced, had a very extensive practice as a land agent and valuer, holding the agencies for many large estates in the North of England. Beyond taking a keen interest in all matters pertaining to agriculture, he did not take any active part in public affairs. He was a Justice of Peace for the county of Durham and a Fellow of the Surveyors' Institute. About seventeen years ago he took into partnership his nephew, Mr. George Jackson Curry, and Mr. J. Oldroyd Lee, practising under the title of Henry I. Curry & Co., at Stockton.

ON Monday of last week a large historical picture by the well-known artist, Mr. Frank O. Salisbury, was unveiled in St. Albans Cathedral. It has been presented in conjunction with his wife by Alderman Faulkner, a past mayor, and measures about 17 feet by 6 feet. The subject is the funeral procession of Queen Eleanor, and the picture has been erected upon a stone console, exhibiting on its base various coats of arms and setting forth in an inscription that the gift is a thankoffering to Almighty God and a memorial to the men of Hertfordshire who have fallen in the war.

A MASS meeting of allied building trade operatives was held in the Smithfield Market, Birmingham, on Friday. Mr. W. Lawrence presided, and speeches were made by Councillor Saunders (Carpenters' and Joiners' Society), and Mr. A. Lane (Bricklayers' Society). Two resolutions were passed. The first refused to accept the terms offered by the employers and referred the rules back to the Committee on Production. The second demanded forthwith an increase of war wages of 4*d.* per hour, and insisted upon the matter being pressed through all its stages as soon as possible, the increase to be reckoned as from the next pay day.

WE have received a little brochure on the Venus pencil from the American Lead Pencil Co., of 173-175 Lower Clapton Road, London, E. The brochure gives reasons why we should use the pencils in different processes of draughtsmanship, but we do not need converting. Though the Venus pencils are expensive in first cost, we have found them the cheapest we have ever bought. The quality of the lead used is so good and uniform that it may be said that anyone who carries a Venus pencil carries what will outlast any three ordinary good pencils and will be a pleasure to use all the time. Though the American Lead Pencil Co. is not an English concern they have works in England, and we hope that they will do so well here as to adopt the Union Jack instead of the Stars and Stripes, as they are worthy of British nationality. Every possible grade is supplied from the hardest to the softest lead.

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THE ARCHITECT
AND CONTRACT REPORTER

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What the Architect's Client Sometimes Gets.

We have tried in a previous article to define what most of the architects' clients want, and it may serve a useful end to consider what some of them obtain from a profession composed of men of very varied capabilities and standards. Though the architects we shall describe may be a small minority, there is little doubt that the effect of their mistakes does harm to the general body and lies at the root of the distrust of the profession which is sometimes expressed in round terms.

Put in a nutshell, we believe that many architects take advantage of the client's ignorance of technical matters, but do so perfectly innocently from want of thought and want of a clear logical conception of facts which are easily understandable.

We doubt if anyone will gainsay the truth of the statement we have made, that most of the architect's clients build because they cannot avoid doing so, but that they have other tastes and habits which they would like to gratify did finance permit. They seek an architect's services as a rule with little or no previous knowledge of the cost of various items of a builder's work, and for that reason are compelled to trust to their architect's advice. We should, as far as is humanly possible, put ourselves in our clients' place, considering not only their expressed wishes, but imagining their instructions were more ample and specific, as they would be, had they a specific knowledge of building and of its cost. Thus, it is hardly fair dealing to give a man stone quoins and columns in a design if we have reason to know he would not spend money on them if he realised what he was doing; and yet this is what many men do, excusing themselves by assuming that they have to make sacrifices on the altar of architecture. In reality, a client pays fees to an architect as he does to a solicitor, for carrying out his purpose in technical matters which he cannot deal with directly himself, and it is no part of his intention that his architect shall spend his money to demonstrate the soundness of the architect's views. Nor do we really advance the cause of art by giving any man what he cannot readily appreciate; it is not as if his education was committed to our charge, and we have but one clear specific duty to advise him, not in our own interest, but in his, to give him what he likes and values, not what we wish to give him. The one course will make a man not only distrust the architect but distrust architects as a class, the other will be to make a friend and help to establish the general reputation of a profession.

Again, when it comes to a question of arrangement and plan, many architects can see perfectly well what it is their clients really want, but because they prefer to give him something else they will impose on his want of power to define his views and unwillingly drive him in another direction, which is hardly playing the game. Many architects have done this at some time or other in their careers, and have had reason to reflect subsequently on the truth that the game has not been worth the candle. The quality of fitness again must be considered. The house unfurnished is only a shell; we should consider how it will look when completed by the furniture and decorative treatment which our clients will adopt. Very frequently, we should realise if we did so that we were, in following out our own design, merely producing part of a discord, while a humbler flight in the direction of artistic expression would result in a harmony which it should be our aim to promote. We will go so far as to state that many architects build for others what they would never build for themselves, and if they would only study the question in its psychological aspect they would be on infinitely safer ground. We are quite certain that the architectural profession would stand on a firmer basis to-day if architects, as a whole, had realised that their real function was to be good servants of the public rather than students of an art they believe to be beyond the appreciation of the average man.

And in cases of commercial buildings especially the architect who forgets that his client simply wants to make a speculation pay and has no wish to erect an architectural monument will frequently do his reputation and that of his colleagues harm. Few of us, if our own interests were concerned, would be willing to sacrifice income for the satisfaction of carrying out some special form of architectural treatment, and yet this is what many by the work they do would seem to assume was the case. If our client remained in blissful ignorance of the alternatives which might have been adopted, all might be well, but, unfortunately, they do not. Someone or other will probably show him what his architect has sacrificed on his behalf, and future commissions pass into other hands. As our knowledge of art cannot procure us clients unless we can secure their good will, it is surely common wisdom to study what it is our clients want rather than to attempt to override their wishes. If we do not, we are only opening the door which will admit a crowd of rivals who will seek to eliminate us and take away our kingdom, which should be founded on the good-will and confidence of the public.

It may be urged that in what we have said we have overlooked the claims of architecture, but this will be seen on reflection to be untrue. If we go back to the great epochs of the art, to Greece in the days of Pericles and to the thirteenth century, we cannot for a moment believe that the master builders, sculptors and architects of those times were forcing the communities in which they lived to accept results they did not want. It is obvious that the great cathedrals of the Ile de France would never have been built unless they represented ideals dear to the people, for no other stimulus would have been sufficient to induce the relatively poor and struggling populations of the Middle Ages to raise the great stone masterpieces of the world. If for any purpose we can succeed in making others think that great expenditure in building is justified, or that a supreme occasion necessitates sacrifice in some direction or other, we shall once more be able to build architectural monuments comparable to those of past times, otherwise we shall be wise in confining our efforts to carrying out what our clients want in the present, trusting that our work may express the wants and wishes of the public in the best manner possible, for then, and only then, shall we possess living modern architecture.

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Illustrations.

FOUR ILLUSTRATIONS FROM "THE ENGLISH HOME"
THE LEYS SCHOOL, CAMBRIDGE:—PROPOSED MEMORIAL.
ALL SAINTS SCHOOL, BLOXHAM:—PROPOSED ALTERATIONS AND ADDITIONS.

Notes and Comments.

Mr. John Murray's Letter.

We give in this issue a letter from Mr. John Murray on the subject of the proposed 300,000 cottages, with every clause of which we are in agreement. With Mr. Murray we believe that conditions are changing so rapidly that it is unwise to build cottages in large numbers and in the most permanent form. More than this, we believe that new methods of heating, of cooking, communal arrangements for the elimination of the drudgery of individual service will be likely to render the typical cottage and small house of the past a derelict within a comparatively small number of years. The competition held by the R.I.B.A., and that proposed by the Scottish Institute of Architects, neither take the new conditions—which are likely to be controlling factors—into consideration. If we build, and build at once, as we are being urged to do, we may be like people who on the eve of a discovery which revolutionised armaments insisted on executing large orders for weapons which would have to be scrapped as useless in a few years. This is all apart from the fact that we are very sceptical as to the need for 300,000 houses, and, in addition, are absolutely unconvinced that what is required cannot be supplied, as it has been in the past, by private enterprise.

National Kitchens.

We are asked by the Publicity Department of the Ministry of Food to call attention to the National Kitchen movement, which, it is stated, is rapidly gaining ground in public favour. The importance of well cooked food and the avoidance of waste, both objects which are met by the treatment of food on a large scale under good conditions, are emphasised, and it is suggested that in connection with the housing schemes which are contemplated we should also consider the incorporation of National Kitchens. We are quite in agreement with this view, as we hold that in the future means must be found of reducing the very large amount of work involved in the upkeep of a number of small houses closely adjacent to one another. It is to be hoped that authorities and individuals will not show undue haste in pushing through housing schemes, as we are sure that despite the individualism which is so characteristic of the race, common sense will before long prevail, and will enable us to simplify questions in heating, cooking and other matters, and the workers' house of the future will consequently be widely different from the traditional cottage of the past.

Stonehenge.

We are glad that Stonehenge has been given to the nation by Mr. Chubb, and as the gift was addressed to the First Commissioner of Works, we hope it may have an allegorical significance and induce him to think of the importance of ballast in connection with the schemes of his department. The great stones of Stonehenge remain to-day, and come down to us from a date which we can only guess at. We are quite sure that Sir Alfred Mond's favourite scheme—the War Museum—has no justification, and that if built it would be relegated to other uses before long. No one will want to wander round relics of this war ten years after peace returns, and the proposed museum would, after forming a field of employment for many caretakers, finally share the fate of the unwanted. It would be infinitely better to complete the British Museum and use the additional galleries for a War Museum as long as they were wanted, for the miscellaneous collections could then be cleared away and space allotted to our greatest national museum, which badly needs more room. In addition, we should have completed one of London's greatest buildings in a worthy manner.

Waste in Manchester.

We are sorry to learn that the building of the Manchester Art Gallery has been finally abandoned, and the winners of the double-barrelled competition only get the premium laid down in the competitive conditions. We learn that the Art Gallery Committee and the Libraries Committee have come to the belated decision that their requirements cannot be met by the erection of a combined building! It is preposterous that a public body should gravely institute an important competition and then decide after some years that it never should have been held. In such a case the architects whose designs were placed first are not fittingly recompensed by the payment of any premium, but should, as a matter of common justice, be commissioned to prepare plans for any scheme substituted for it. We hope that after the war there will be much less time wasted on public competitions, and that public bodies may in time take a juster view of architects' position and rights.

An Architect as a Sheriff of the City of London.

Last Friday Mr. Banister Fletcher, F.R.I.B.A., was presented with a shrieval chain at the Carpenters' Hall to commemorate his election as Sheriff. The Master of the Company having spoken, Sir John Baddeley made the presentation to Mr. Fletcher, dwelling on the important duties which fell to the holder of the office, and also referring to the esteem in which Mr. Fletcher was held by his professional colleagues and friends. Mr. Fletcher responded, and in a humorous speech referred to one of his functions—that of common hangman—which he suggested he should leave to his Under Sheriff. Mr. Pitman, of the Stationers' Company, and Mr. Knight, of the Tallow Chandlers' Company, moved and seconded a vote of thanks to the Master of the Carpenters' Company for presiding, and for allowing the meeting to be held in Carpenters' Hall, and the audience adjourned for luncheon. Mrs. Banister Fletcher is to receive a pearl necklace, which Mr. Fletcher informed the audience she greatly preferred to his chain of office!

Professor Adshead at the Town Planning Institute.

We are very glad that the Town Planning Institute has elected as its President Professor Adshead, who has done more than most architects to further the cause of town planning. His address has reached us too late for insertion this week, and as it is a carefully prepared and comprehensive survey of the whole movement, and the work which lies before the country in the future, we shall not attempt to give extracts from it now, but shall publish it *in extenso* in our next week's Town Planning issue, together with some comments on the issues raised. We hope that the worthy ends which Professor Adshead and others have in view may be realised, as they can be, without making attacks on the private enterprise of the nation, which is by far its most valuable asset.

Destruction in the War Zone

As we go to press we hear of the wanton destruction of St. Quentin and the burning of Cambrai, and we hope, with Sir William Bull, that the Allied Governments will give the Germans a clear intimation that such acts will bring in their wake retribution in kind, and that for every town wantonly destroyed by the Germans similar damage will be inflicted on towns in the Fatherland. It is disgusting and abhorrent to us to have to use such threats, but we must at least be convinced that it is the only way to deal with a people who have rivalled and surpassed the worst crimes committed in mediæval history. We have been unwilling to bomb towns, to use liquid gas, and to add to the horrors of war, but we have had in the end to deal out measure for measure.

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THE SOCIETY OF ARCHITECTS.

CONTROL OF BUILDING MATERIALS.

Early in the session a Conference was convened by the President of the R.I.B.A. on the above subject, consisting of eight representatives from the R.I.B.A., four from the Surveyors' Institution, four from the Institute of Builders, and four from the National Federation of Building Trades Employers and the London Master Builders' Association jointly.

On January 8, 1918, a meeting of the Conference was held, at which those present passed the following resolution:—

"That this Conference is strongly of opinion that all restrictions upon the supply and delivery of raw and manufactured materials should be abolished immediately upon the declaration of peace, and a free market be established therein."

The Council of the Society was afterwards invited to express its views on the subject, and passed a resolution to the effect that in its opinion the Conference as constituted was not sufficiently representative, and should be enlarged to include representatives of kindred Societies and Institutions, and of Unions and Associations of Manufacturers and Workmen engaged in the building industry.

Further the Council of the Society passed a resolution expressing itself in favour of the principle contained in the resolution, but not with the terms in which it was expressed, and declined to co-operate in communicating the Conference resolution to the Government in its present form.

The Conference on March 11 considered the Society's resolutions, and unanimously invited it to be directly represented on the Conference, and to nominate three representatives. At the same time representatives of the Quantity Surveyors' Association and the Institution of Municipal and County Engineers were added to the Conference, and at a meeting held on March 27 the following resolution was passed:—

"That this Conference is of the opinion that the principle of priority as regards the supply of raw or manufactured materials should be abolished immediately upon the declaration of peace, and that an open market be established in such materials as the best means of encouraging production."

It was arranged that a deputation, on which the Society was to be represented, should put the views of the Conference before the Government, but some two months or more elapsed before the Government was approached, and it was not until the end of June that an appointment for July 9 was fixed with Dr. Addison, the Minister of Reconstruction.

In the meantime the situation as regards the supply of materials had changed, and there was every prospect and evidence of a future shortage, and the Council of the Society on further consideration of the matter withdrew from the deputation.

From the official report of the proceedings at the interview with Dr. Addison, it would appear that the deputation represented only the R.I.B.A., the Surveyors' and the Quantity Surveyors' Institutions, and it would seem that not only the Society, but the Association of Municipal and County Engineers, and the representative bodies of the Building Trades had withdrawn their support to the resolution of March 27, and the views put before Dr. Addison on July 9 were not, as was stated, those of the majority, seeing that only three out of the eight institutions constituting the Conference were represented on the deputation.

The Chairman of the Conference, Mr. Hare, made it clear to Dr. Addison that the majority of the Conference admitted the present evidence of a future shortage, but that the deputation was in favour of abolition of control.

Dr. Addison touched the spot in expressing the view that where there was no shortage of material there would have to be some very good reason for continuing control, or in other words that if there was a shortage there would have to be some measure of control, which is the view of the Society, and probably of other bodies in the alleged minority on the Conference.

He further stated that it was the considered purpose of the Government to facilitate the resumption of the industry on normal lines as early as possible. In that direction Dr. Addison may be assured of the cordial support of all concerned with the building industry, whatever their present views on control may be.

Building after the War.

The Council of the Society having been invited by the Building Materials Supply Committee of the Ministry of Reconstruction to submit its views on certain questions contained in a reference to the Committee regarding the supply of materials and labour, &c., and to make recommendations as to any measure of control, appointed the President, Mr. E. J. Sadgrove, F.R.I.B.A., the Vice-Presidents, Mr. A. Alban H. Scott and Mr. E. J. Partridge, F.S.I., and the Chairman of the Practice Committee, Mr. George Baines, F.R.I.B.A., to meet the Committee on the subject in amplification of the views expressed in the following memorandum submitted by the Council on June 20.

Memorandum embodying the views of the Council of the Society of Architects on the Ministry of Reconstruction's references 3 and 4 to the Building Materials Supply Committee.

Reference 3.—*Priority.*—In the event of the supply of material or labour being insufficient to fulfil the total building demands during the transition period, the Council suggests the following order for priority and control to be exercised for the shortest possible time.

Order of Priority Suggested.

1. Work of national importance, such as buildings, required to accelerate ship-building or for other urgent public services.
2. (*a*) Necessary buildings for essential industrial purposes.
   (*b*) Housing accommodation of a low rental value.
   (*c*) Reinstatement of premises damaged during the war.
   (*d*) Essential maintenance repairs.
3. Schools, sanatoria and similar work where urgently needed.
4. General housing accommodation.
5. Buildings of a non-productive kind, but urgently required in the interest of the public.

Note.—All other buildings to be considered on their merits and priority to be granted according to their national importance.

Method.—The Council strongly urges that if priority and control is instituted, the following points should be most carefully considered by the Committee:—

1. That all schemes for building work, whether for Government Departments or for industrial work, cottages and other classes of buildings, should come before one Committee only, and that because certain building work may be carried out for or by a Government Department, such work should not on that account be given preference, but that it should also be decided entirely on the basis of national importance.

It is suggested that no Government Department, or Local Authority should have power to commandeer any building material, but that the purchase of such material should be regulated according to the national importance of the work for which it is required.

2. That a priority Committee for post-war building work should be instituted and started immediately, so as to ensure a continuity of policy and form a means whereby prospective building owners or their architects can get into touch and consult a controlling authority on building work after the termination of the war.

It is suggested that the Committee should consist of 14 members, and be constituted as follows:—

1 member nominated by the Society of Architects.
1 member nominated by the R.I.B.A.
1 member nominated by the Surveyors' Institution.
1 member nominated by the Quantity Surveyors' Association.

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1 member nominated by the National Federation of Building Trade Employers.

1 member nominated by the Institution of Municipal and County Engineers.

1 member nominated by the Trade Unions Council.

6 members nominated by the Government.

1 member nominated by the Government as Chairman of the Committee. Total, 14.

(2) Administration of Local Committees.

The Council urges the adoption of the principle of decentralisation, and suggests that in forming local Committees under a Priority Committee certain existing machinery should be utilised.

It is suggested that these local Committees should consist of the existing local areas formed by the Munition Works Board, under a Chief Surveyor, with the addition of two other members to be nominated by each of the County Councils in each area, one of these two members being a person who is not a member of the County Council concerned.

The Council invited the Committee to consider the question as to whether the Chairman of the local Committee thus formed should be ex-officio a member of the Priority Committee.

Procedure.

On the point of procedure it is suggested that the local Committees should obtain all the necessary information regarding local needs, and the available supplies of labour and material, &c. Applications from the various areas should in the first instance be dealt with by the local Committees, and the claims should be submitted by them to the main Committee, with any recommendations as to the order of priority.

The final settlement of priority claims would rest with the main Committee, who would keep the local Committee informed of the general national needs and supplies, &c.

It is further suggested that wide publicity should be given to the proposed post-war arrangements, so that building owners contemplating work covered by the priority suggested in items 1, 2 and 3 may become aware of the proposals so that they can prepare their schemes.

In this connection the interests of architects serving with H.M. Forces should be carefully considered, and only schedules for the most urgent buildings should now be prepared, such as those mentioned in the suggested order of priority items 1, 2 and 3.

Manufacture of Materials.—It is anticipated there will be a considerable shortage of manufactured materials, particularly bricks, and that it will take some considerable time to obtain any adequate stock to meet the demand.

It is suggested that a general investigation of the present condition of the brick-fields should be undertaken with a view of enabling them at the earliest possible date to ensure quick manufacture; similar steps are suggested with regard to cement, lime and plaster works.

The Council has already presented a report to the Department of Scientific and Industrial Research, with regard to the greater utilisation of local materials, and it is considered by the Council that the carrying out of its proposals would considerably help to relieve any shortage of essential materials.

After bricks it is anticipated that timber will present the greatest difficulty, and it is suggested that the manufacture of concrete or other materials to take its place should be investigated. It may be possible that some of the present munition works may be utilised for this purpose, and also for the manufacture of certain fittings required for buildings.

It is further suggested that the Committee should ascertain from actual manufacturers of various building materials the maximum output of their plant, how that output can be supplemented if necessary, and the condition of such plant in relation to manufacture.

The Council would also suggest that in demobilisation from H.M. Forces the release of architects and of men whose services are necessary in the key industries of the building trades should be expedited.

Reference 4.—*Unduly High Prices.*—The greater use of local materials as mentioned under reference 3 will tend to reduce prices. The attention of the Committee is called to the fact that in pre-war days certain railway rates for building materials were extremely excessive, and greater control in this respect is urgently required.

Canals should either be taken out of the hands of the railway companies and nationalised, or the question of very much greater control as to extensions, improvements, and the reduction in cost of maintenance, working and freightage for water traffic on inland waterways should be seriously taken up.

For instance, by the comparatively slight additional formation of short arms to the present canal systems a very much larger tonnage of building materials would be carried by such waterways, and if the canal banks were improved the use of electric or motor-driven barges would help very considerably both as to cost of freightage and speed.

The Council understands that there is a Committee considering what use can be made of the surplus mechanical transport facilities at the termination of hostilities, and it is suggested that a certain number of these vehicles should be reserved for the transport of building materials.

Materials should be ordered for building work much earlier than has been usually done so as to enable greater use to be made of the necessarily slower water traffic.

A further point for consideration is the high prices in certain trades caused by the combination of merchants and also the combination of manufacturers.

Reference has already been made to the question of the greater use of local materials, but in addition to this, throughout the period of control or priority, it is suggested that the Committee should consider and eliminate as far as possible all wasteful transport.

Undoubtedly one of the greatest causes of unduly high prices of building work is the lack of interest the workers have in their work. The Council does not consider that it is a competent body to discuss this matter in detail, but earnestly suggests that consideration be given to some arrangement whereby the actual workers on the building should have directly or indirectly a financial interest in the result of their labours.

It is considered that for certain classes of buildings it would be possible to extend the standardisation of materials.

Control.—If there should be Government control in the form of priority, it should apply to the production, transport and distribution of materials. With regard to the latter point every endeavour should be made to regulate distribution, so that unnecessary transport is eliminated as indicated above.

With regard to the question of purchase, fair maximum prices should be arranged for a certain period after the war, and if possible the arrangements with the manufacturers should be such as not to hinder production, but rather to accelerate it. If the Committee could give the building public some guidance as soon as possible as to the anticipated position of priority and control in the country, it would enable manufacturers of building materials to prepare themselves and put them in a better position to judge the probable output required. At the present time there is naturally a good deal of vagueness and uncertainty existing in their minds.

Generally.—The Council of the Society takes a very keen interest in the problem under consideration, and offers its services to the Committee in connection with any schemes put forward for their solution.

By order of the Council,

C. McArthur Butler,

The Secretary of the Society.

Dr. Henry Dyer, C.E., the well-known educationalist, died last week in Glasgow. At the time of his death he was chairman of the Glasgow School Board. Dr. Dyer spent ten years in Japan as the founder and principal of the well-known engineering college at Tokio. For his valuable services he held several Japanese distinctions and orders conferred upon him by the Emperor.

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CORRESPONDENCE.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

The Proposed 300,000 Cottages.

Sir,—As there appears still to be much uncertainty about this problem, may I be allowed to submit the following points for consideration of all interested in connection with this important question, the best solution of which may necessitate the adoption of an entirely new system?

1. A large number of so-called temporary buildings with thin concrete walls have been erected during the war and used for dwellings satisfactorily. They will last for a few years, and they are cheap and sanitary.

2. The Local Government Board of Scotland has decided to build for housing somewhat similar cheap concrete buildings that are calculated to be of a more permanent nature.

3. If so-called temporary cottages were built for all the housing required immediately after the war, they could be erected very rapidly, would probably last about ten years, be cheap, sufficient for all necessary purposes, and release at an early date much labour for other essential trade developments for which speed is the very essence.

4. The great electricity scheme recommended by the Board of Trade Committee a few months ago, and which is proceeding, will probably provide a huge amount of electric power throughout the country within a few years.

5. About ten years hence a vast amount of electricity will doubtless be available throughout the country for domestic heating and lighting, probably at a cost of only a fraction of a penny per unit. At that time money will probably be much cheaper, and concrete or other cottages heated and lighted by electricity could be built at an economical cost, and calculated to last for, say, about fifty years or more.

6. Having regard to the vast and rapid development of all branches of science that will assuredly occur during the next fifty years, there does not appear to be any sufficient reason why it should be necessary or expedient to build cottages of a more substantial or costly nature than are calculated to live for more than about fifty years.

7. If these several relative facts have not yet been fully considered in connection with this problem, it would appear to be very desirable for it to be done now before the country is committed to a programme that may not prove to be the most sound, either scientifically or economically.—Yours, &c.,

John Murray.

11 Suffolk Street, Pall Mall, S.W.:
September 30, 1918.

Cottage Reform.

Sir,—With regard to the great question of "Cottage Reform," I have thus far seen no attempt to introduce successfully a scheme used in the Maidstone Museum of one central fire to warm a room on each side of it; the difficulty would be the economical cutting off of either room when not in use.

Very few cottage stairs seem contrived to facilitate the decent removal of the dead; this is a very important matter, and well-nigh impossible in a confined space, with many winders.

There can hardly be found a better model for the economising of space than a well-found ship.

While without any angry feelings on the point, I do crave for more of the spirit of sweet reasonableness for, judging from the many letters in the daily Press, there is little hope for the production of cottages suitable for workers save from the gentler sex. If they can do it, well and good, though there are already in existence very many excellent examples convenient of service, economical, pleasant to live in and look on, that have been illustrated in the professional journals of the past, over which, till now, there has been little if any cause for complaint, designed by architects; nor can it be said with truth that they have been merely wasting their time, talents, thoughts and efforts, with the sole result of having done it all amiss. It is perhaps wise that no notice has been taken of this sorry attempt to depreciate architects, which can result in little, if any, good to cottage architecture, to say nothing as to the giving more to the country in better housing than has, under just treatment, been provided already. It is simply a case of demand and supply. What costs little is worth little.

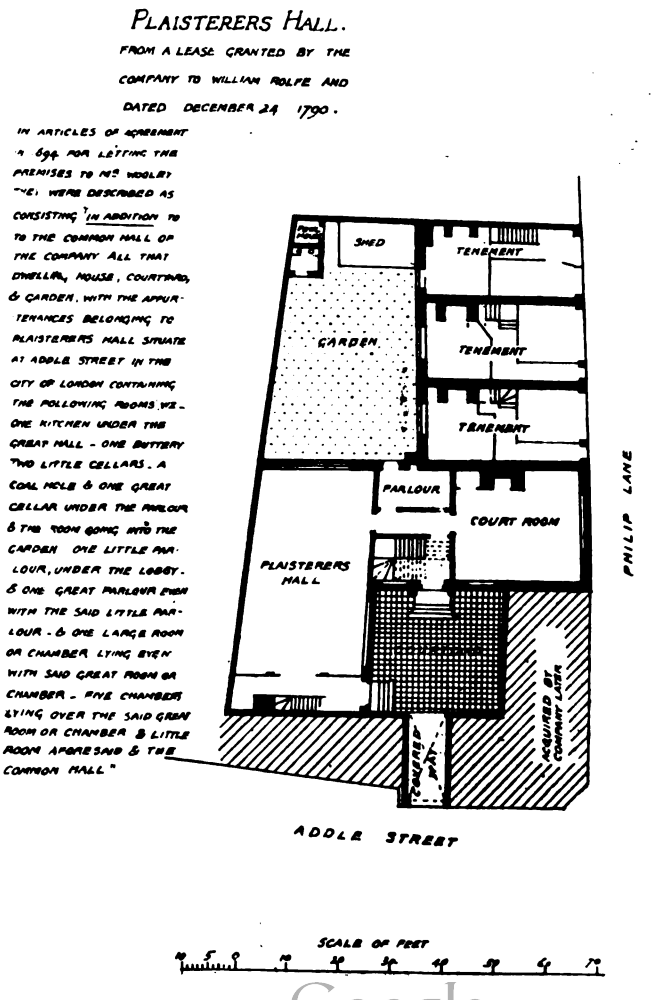
I hear that one lady advises the removal of used fuel from the grate by opening the bottom of it and letting the refuse fall into the dust-bin below it; but that can hardly be done without putting the ground floor on high above it, and thus increasing the cost. It would be far easier to take it from the floor itself than to have to lift it again.

There need be no dearth of good cottages if the producer gets a just return for capital invested, but those who require special fads in parlours, separate bath-rooms, and more than three bedrooms, must be prepared to pay extra rents for them. Nor is there any evidence of any lack of consideration for the comfort of their occupants.

Cottages of my own design, built nearly 50 years ago, are never empty; for lack of more of them they are often applied for by those who could well afford something better, each of them having a good living room, scullery, larder, and three bedrooms. More ambitious ones must be paid for in proportion to extra cost; failing that, they will not be forthcoming. Many persons do not get what they want because they have neither the ability to sketch roughly nor the patience to give dimensions or describe their desires. Even the poor maligned architect can hardly divine them, however much he may wish to give them what they want.—Yours, &c.,

E. Swinfen Harris.

September 28, 1918.



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NOTES ON THE DEMOLISHED HALLS OF THE CITY COMPANIES.*—NO. 1.

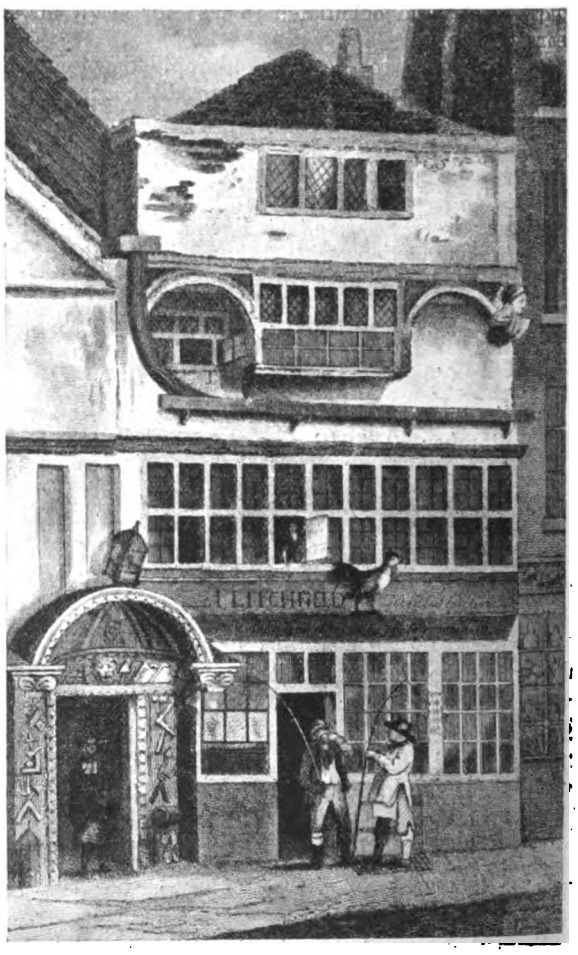
In addition to those Halls which, like the Fishmongers', Carpenters', and many others, replace older buildings which have been destroyed, evidence in the form of plans or prints exists relating to the Halls of the Weavers, Joiners, Tylers and Bricklayers, Masons, Plaisterers, and Plumbers and Broderers' Companies, which will be briefly set forth in the following notes as being of interest both in connection with the Guilds and old London.

The *Tylers and Bricklayers' Company* received their charter in 1569 from Queen Elizabeth, and were empowered to search for defective bricks and tiles within the City and a few miles round it. They formerly possessed a Hall in Leadenhall Street, almost opposite the church of St. Katherine Cree, the entrance to which is shown in an old print as having been between two adjacent houses. Maitland refers to the Hall as being reached through a narrow passage from the street. From a survey made in 1849 the Hall, which was subsequently used as a Jewish Synagogue, and at a later date as the Sussex College, is shown fronting on a small inner courtyard. At that date the houses fronting Leadenhall Street and the elevation of the Hall buildings were shown as being simply treated in a semi-Greek type of classic. Doubtless they had been frequently altered at various times, but the main divisions show the original buildings. When the college was transferred to Moorfields, Sussex Hall was built.

The *Plaisterers' Company* was granted a charter in 1501, and had a Hall at the corner of Addle Street and Philip Lane, close to Brewers' Hall. This building is one of many which are attributed, probably on insufficient evidence, to Sir Christopher Wren. It was subsequently used as an Independent Chapel, which was transferred to Homerton in 1770. It was let for various commercial purposes in the nineteenth century, and finally destroyed by fire in 1882. The site now forms part of the premises of Foster, Porter & Co., Ltd. Plaisterers' Hall is shown on a plan dated 1790, while particulars given in articles of agreement dated 1694 enumerate the accommodation provided (mentioned in a note on the plan given). A view of the quaint entrance is reproduced from the series of valuable drawings which form the Crace Collection.

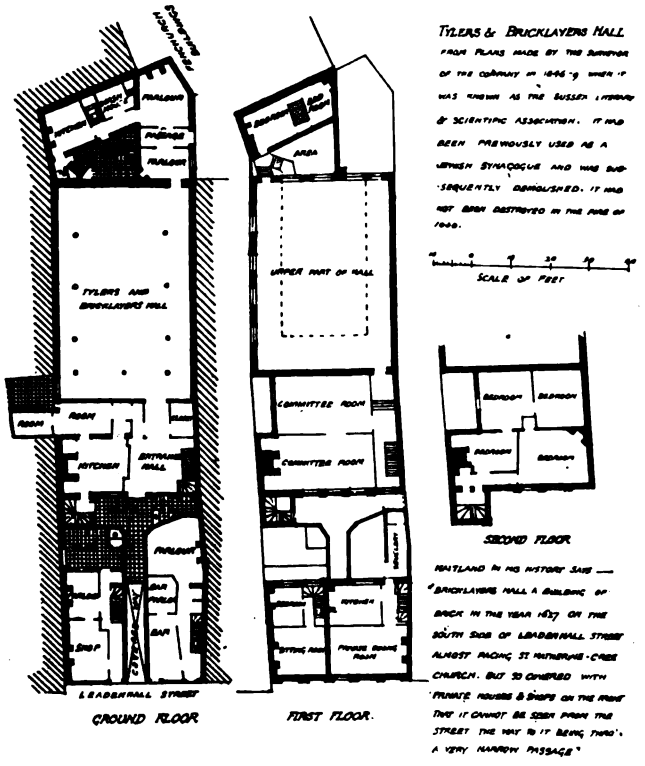


ENTRANCE TO PLAISTERERS' HALL.—From a drawing by T. Hosmer Shepherd.



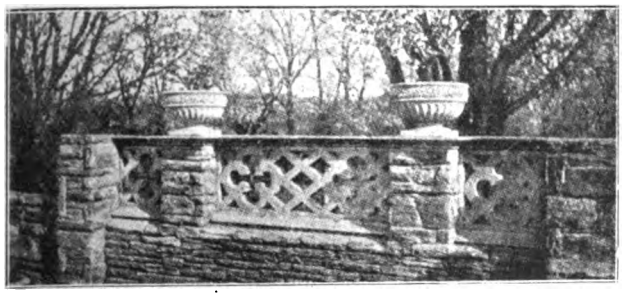
TYLERS AND BRICKLAYERS' HALL.—ENTRANCE TO COURTYARD FROM STREET, AND OLD HOUSE AT SIDE.

* We shall be glad if any of our readers having prints or drawings, or other information bearing on the subject, will communicate with the Editor, in order that any information may be embodied in a book to be published by Messrs. Batsford on "The City Companies and their Halls."

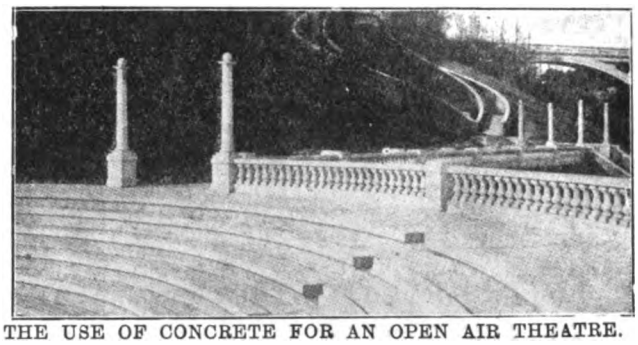


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Monthly Review of Periodicals and Books.



THE USE OF CAST CONCRETE FOR BALUSTRADING
From the "American Architect."



THE USE OF CONCRETE FOR AN OPEN AIR THEATRE.
From the "American Architect."

Our Architectural Papers.

The Architect and Builders' Journal.

The character and arrangement of illustrations in the "Architect and Builders' Journal" is good. The very interesting series of monuments is continued by some fine French examples, and a good view of the Victor Emmanuel Monument at Rome, while the series of Detail of Craftsmanship are well selected and very well produced. The series of Late Georgian house plans, by Messrs. Morris & Parnacott, are also interesting. The War Buildings section contains an interesting article on National Kitchens, and the paper is, as usual, attractively produced.

The Architectural Review.

The current number of "The Architectural Review" is a very good one, and is practically divided between an illustrated article on Australia House and a second article by Mr. Goodhart-Rendel on the Churches of Brighton. As to the first we may say that one of London's finest buildings has received adequate and fitting illustration, while H. S. Goodhart-Rendel again shows that he possesses the art of terse and interesting writing. Most men in writing of the Gothic Revival make us feel as if they were stirring dead leaves, while Goodhart-Rendel makes us understand that the Gothic Revival forms an interesting page in the records of architecture, a page ennobled by many great buildings.

The Architectural Journal.

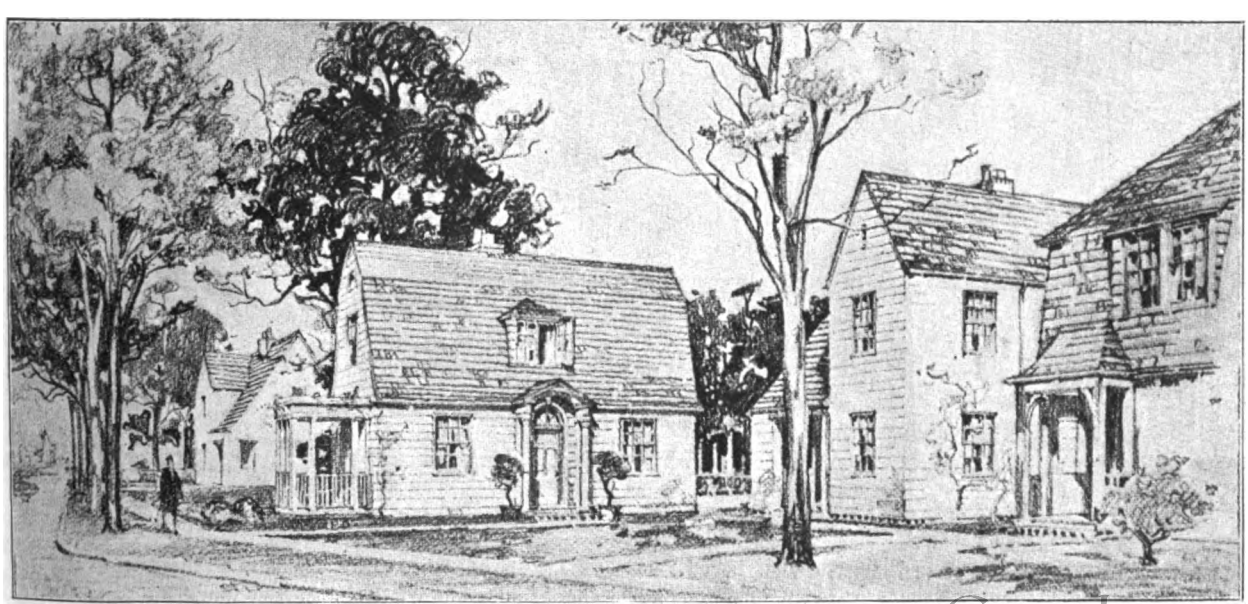
The August number of the Journal of the Royal Institute of British Architects contains an article on the vaulting of the Hindola Mahal at Mandu, which the writer tries to explain by a review of a number of similar examples. A very interesting appreciation of Cecil Brewer is contributed by W. R. Lethaby. We are pleased to learn that he was commissioned shortly before his death to prepare a scheme for the extension of the Fitzwilliam Museum at Cambridge. The "Journal" quotes Sir Alfred Mond on war memorials, but with all wish to do justice to a First Commissioner of Works, we distrust the judgment of any man who is inspired with enthusiasm for that most preposterous of schemes, the erection of a War Museum, which would prove the largest and whitest of all elephants, past or present.

The Builder.

The matter illustrated in the "Builder" during the last month has been of a very varied and miscellaneous character, and has included the Corporation Street Baths, Sheffield, several Housing Competition Designs by Messrs. Halliday, Paterson & Agate, some of Stanley Adkins' church work at Limpsfield, and interiors of 18 Bryanston Square by Robert Atkinson. The "Builder" has had a series of leading articles on Housing for the Working Classes, Post-War Rations and other subjects of the kind. It seeks to emphasise its leading articles by cross headings in darker type, but even this emphasis does not do away with their somewhat colourless character. The last number of the month forms a Heating and Ventilating issue.

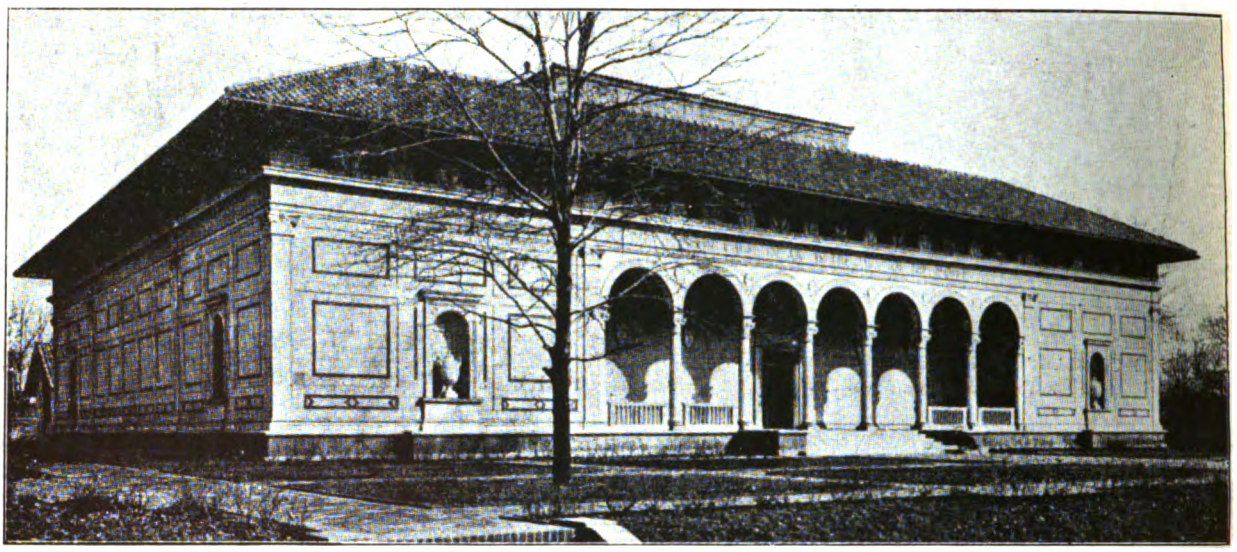
The Building News.

The "Building News" has maintained the quality of one of its double insets every week in spite of the difficulties of the time, while the illustrations which flank it are usually well chosen subjects which need simpler methods of reproduction. Further good illustrations are given on the Chapel of the Thistle and G. H. Fellowes Prynne's Church at Rattlesden in Suffolk. We like many of the comments on passing events, which are usually terse and well expressed. Our contemporary has we think taken the right measure of the very grandiose and ambitious schemes promulgated by the Ministry of Reconstruction. Like ourselves, it is a little impatient of the wise theorising of those in authority.



HILTON VILLAGE.—CORNER OF PARK COURT.—Francis G. Joannes, Architect.
From the "Journal of the American Institute of Architects."

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DUDLEY PETER ALLEN MEMORIAL ART BUILDING, OBERLIN, OHIO.—Cass Gilbert, Architect.
From the "Architectural Record," New York.

American Architectural Papers.

The American Architect.

From the "American Architect" we take three very pleasing illustrations, two of which show legitimate methods of using concrete, and illustrate a paper by the Director of the Educational Bureau of the Portland Cement Association (August 21); the third is an attractive view of one of the new housing schemes in America. A most excellent article is also given on "Professional Etiquette," the writer of which says that while we say the architect should make himself a good business man we also say he "must not make good in that fundamental of all business transactions—responsibility," and though we tell him that his work over the drawing board is purely objective, we absolutely prohibit him from taking any part in the actual building. Why, asks the writer, should not a positive code of ethics be thus stated? 1. Do unto others as you would they should do to you. 2. Be a self-respecting gentleman in every act of life. 3. Be a conscientious, faithful business man in your dealings with clients, builders, and associates. 4. Give everybody a square deal.

The Architectural Forum.

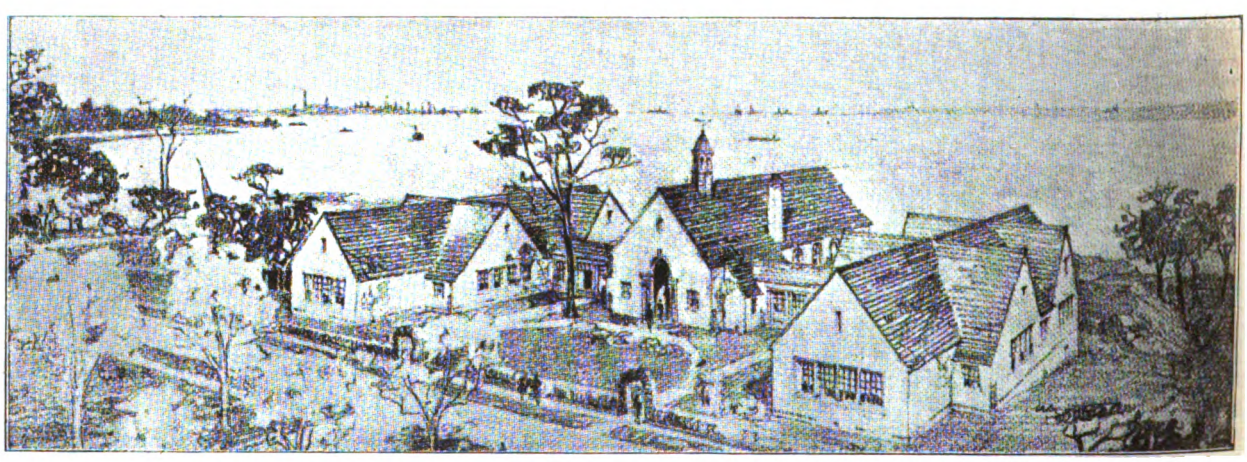
The August number of "The Architectural Forum" contains papers from the managers of four representative architects' offices on the subject of Office Administration, and other subjects treated are Recreation Buildings for Officers and Men in National Army Cantonments, and on the use of Brick in Interior Decoration. The illustrations include the fine Brooklyn Trust Building by York & Sawyer, and a series of large Houses, as well as a photographic view and detail of the main doorway of the Church of St. Vincent Ferrer, which is a good example of Goodhue's skilled mastery of Gothic design.

The Architectural Record.

The "Architectural Record" for August forms an interesting number. We reproduce a view of the Dudley Peter Allen Memorial Art Building, which is a fine example of design based on the earlier Italian Renaissance, with a good architectural plan. Among other interesting articles is one dealing with Housing after the War, by Lawrence Veiller, in which a number of illustrations are given of recent English work.

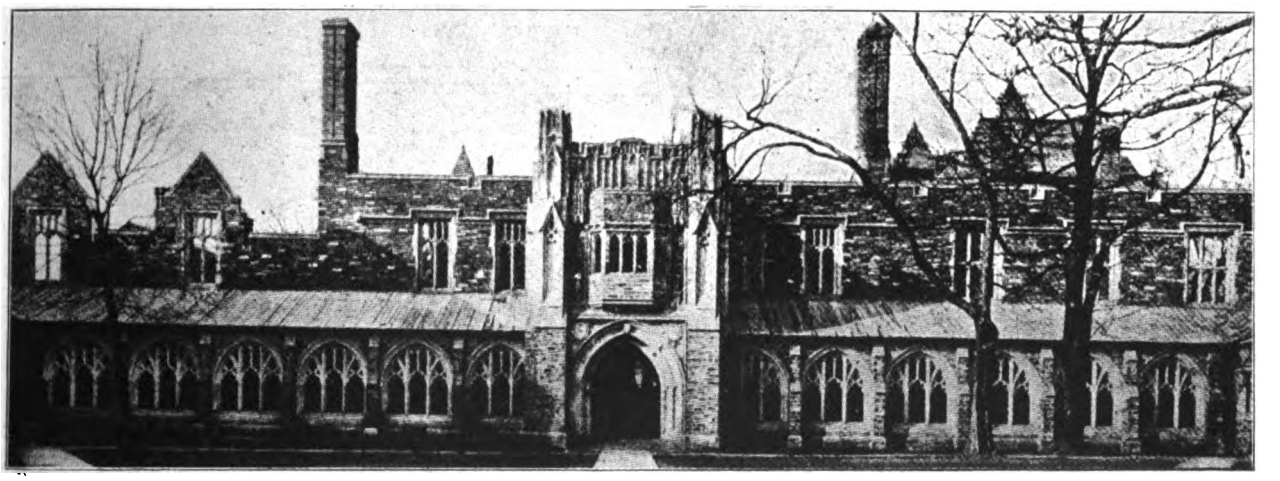
The Journal of the American Institute of Architects.

The chief features of the July number of the "Journal of the American Institute of Architects" are well illustrated articles on the R.I.B.A. Housing Competition; the new Government-built town of Newport News, Virginia, from which we illustrate two specimens of Francis G. Joannes' work, which are very pleasing and in excellent accord with the spirit of American Colonial work; an illustrated article on Reconstruction in France; and an article on "Architecture after the War," which gives the recent discussion at the R.I.B.A. on the subject. We quite expect our cousins across the water will show in dealing with questions of housing that in this as well as in the conduct of operations in the field they have taken full advantage of our experience, and in some ways bettered what we have done.



HILTON VILLAGE: COMMUNITY HALL AND SCHOOL.—Francis G. Joannes, Architect.
From the "Journal of the American Institute of Architects."

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EXTERIOR OF CLOISTERS, PRINCETON UNIVERSITY.—Day & Klander, Architects. From "Stone."

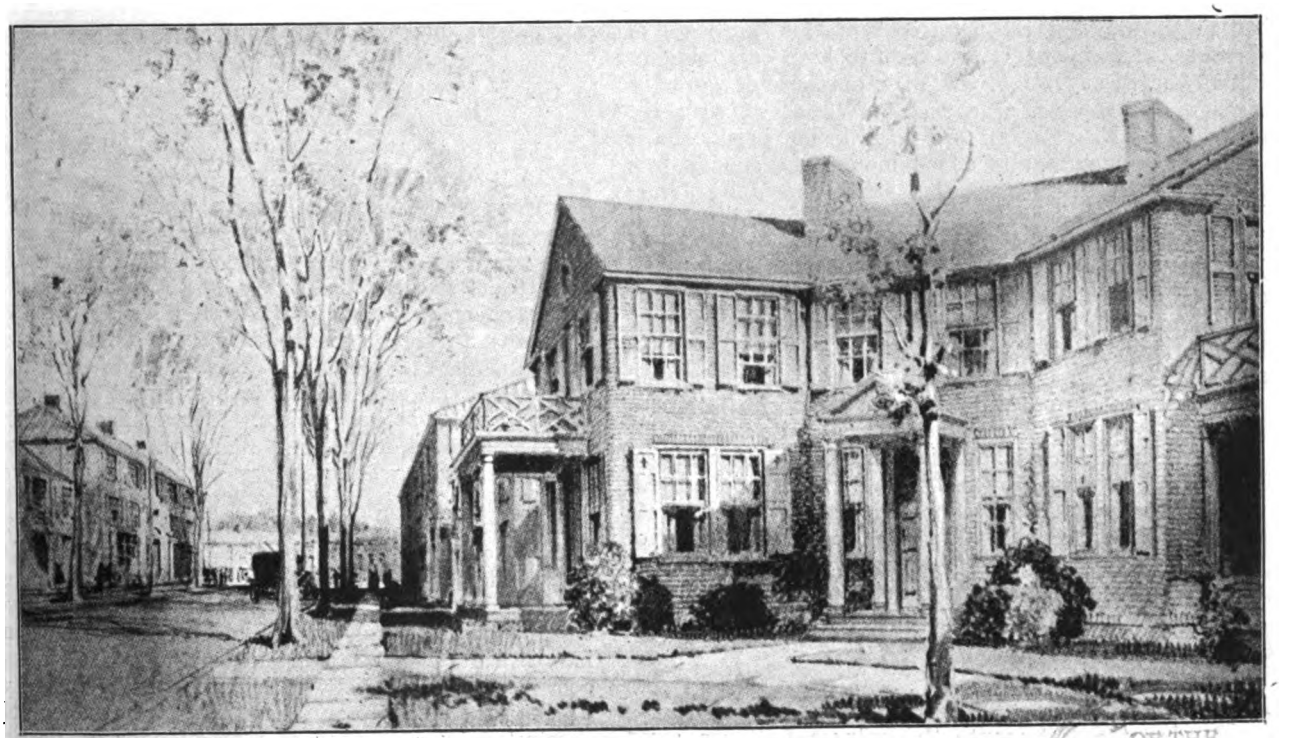
Art Publications.

The Burlington Magazine.

The September number contains a fine illustration of a pair of impossibly ugly Buddhist lions which have served as incense burners on a Chinese altar. A useful and timely article by Aymer Vallance follows on "Churchyard Crosses," which the writer says have never formed the subject of a monograph. In all probability every churchyard had at some former time its cross, the preservation or destruction of which depended on local circumstances; many must have been destroyed during the Commonwealth. The fine cross illustrated is at Tyberton and is a good example of the gabled head type. This and another cross at Madley of similar character are approximately of the same date—late fourteenth or early fifteenth century. The remaining illustrations of English crosses are taken from Hall's "Book of the Thames," and are contrasted with a very interesting series of French crosses drawn by Hanslip Fletcher, several of which are of a partial Renaissance character. The rood supplies the *motif* of the cross at Provenchères, sixteenth century, and at Donpaire, where the head is surrounded by a kind of elongated quatrefoil and mounted on a base of later date. The last example shown, a seventeenth-century example from Domevre-sur-Durbion, is very curious, the central cross being flanked by two smaller ones, and all three crosses borne on the extended wings of a cherub surmounting a square central stem. This form of memorial is very appropriate, and any article throwing light on former examples is of interest and value. A review of M. Camille Enlart's book on the "Bibliography of Costurne" is given, in which the scholarly character of the work is praised.

Colour.

The September number of "Colour" is unusually interesting and attractive. On the cover is a delightful colour reproduction of Charles Shannon's fine portrait of H.R.H. Princess Patricia of Connaught, while the main feature of the month is an article by P. G. Kenody on the Canadian war memorials. Among the pictures illustrated are a fine view of a devastated region on the Western Front, by Lieut. Gyrth Russell, "Forestry Camp in France," by A. J. Munnings, a very fine scene entitled "War in the Air," by C. R. W. Nevinson, "A Canadian Construction Company at Work in France," by Leonard Richmond. Perhaps the two most telling subjects of all are St. Martin's Gate at Ypres, by Lieut. Alfred Bastien, a mass of rich tint and a scene of desolation, and the study of distance entitled "View from



YORKSHIP VILLAGE, NEW JERSEY.—Electus D. Litchfield, Architect.
From the "American Architect."

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HEAD OF TYBERTON CROSS. From the "Burlington Magazine."

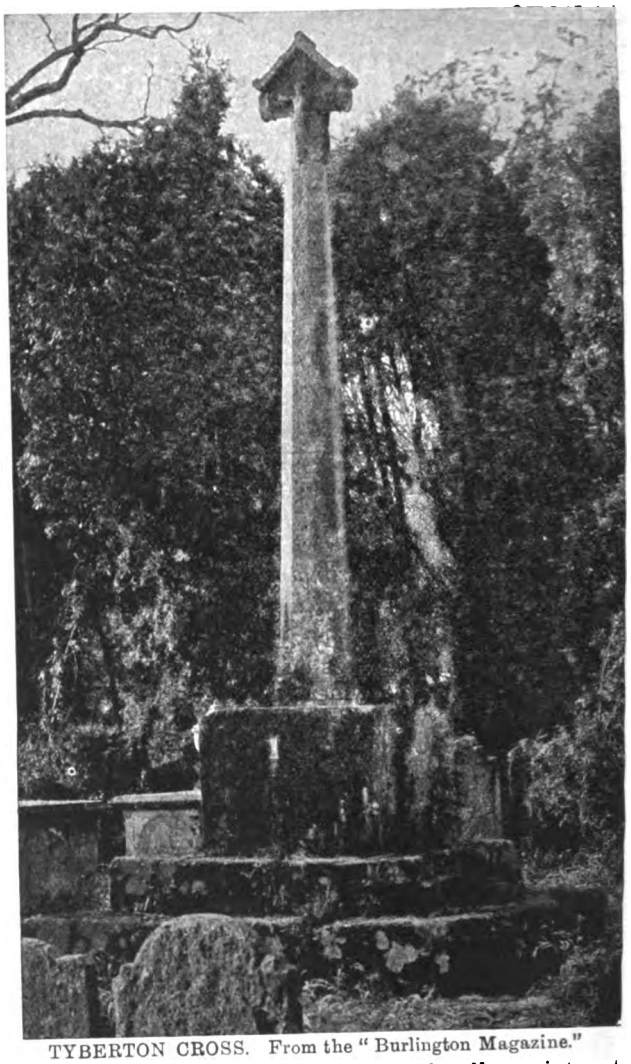
Canadian Camp," by M. Cullen. The work illustrated is full of promise. Among other good illustrations are a portrait of a Mohawk chief by Romney, rich with warm colour, and a colour print from Brangwyn's "St. Nicholas, Dixmude," by a Japanese artist, G. Urushihara. It is stated that the original print, of which only 50 copies were taken, required more than 150 different impressions and must have required the exercise of infinite patience and care.

The Connoisseur.

The "Connoisseur" contains a clever editorial on the ridiculous Luxury Tax, which deservedly condemns this vexatious and feeble device for raising revenue. The corresponding French measure presses more heavily on sport and more lightly on art—dogs valued at forty francs and upwards being liable to duty—whereas, here, the exemption level is £5. Engravings, on the other hand, costing less than 400 francs in France are exempt, while the English limit is £1. Horses here are only liable to taxation if of the value of £150 or over, while our neighbours tax all animals kept for purposes of pleasure, and anyone is free here to keep cats, singing birds, &c., of any value, while the purchase of works of retrospective value is penalised. We agree with the editor in thinking the tax will do little but harm, and is a further inducement to spend money on shoddy productions. A finely illustrated article on John James Masquerier's work by R. R. M. See follows, illustrated by some fine examples, including an exquisite portrait of Miss Mellon. The writer says the artist's work is the outcome of that of Hoppner, Raeburn, and Lawrence, and his technique approaches to theirs while retaining his own individuality intact. "Delicate in touch, yet never coarse; clever, yet never 'precious'; strong, but never coarse; clever, yet without a trace of affectation, he maintains in his English portraits, despite every influence that has affected him, the purest traditions of the land of his origin—France." From an article by J. Kyrle Fletcher, "A Collection of Inkpots," we illustrate a quaint little design of Worcester ware in the form of "King John's Tomb." H. Akeroyd writes on "Sword Collecting," and Percy Macquoid contributes a first article on the furniture of Mr. and Mrs. Mango, illustrated by some very good pieces. It is altogether a very interesting number.

Country Life.

During the last month "Country Life" has given illustrations of Castletown, County Kilkenny, a dignified Georgian house, with exceedingly good pavilion wings, one of which forms a very dignified and pleasing loggia flanked with a domed pavilion, while the corresponding block contains offices. The house, now the seat of Col. Wyndham Quin, was built about the year 1770 from the



TYBERTON CROSS. From the "Burlington Magazine."

designs of Duchart. The interiors are hardly as interesting as the outside views given. Caldecot Castle, Monmouthshire, a fine castellated mass shown by some good views, is described in an article by Avray Tipping. Other matters of interest include an article by Austin Brereton on Drury Lane Theatre, some extremely good articles on Housing, to one of which we have already made reference in a note, articles on furniture by Percy Macquoid, and an article on Sir E. Lutyens' War Shrine in Hyde Park, by Sir Martin Conway.

The Studio.

The "Studio" September number contains an article on the "Water Colours of Horace Mann Levens," by Sir Frederick Wedmore, among which views of the approach to Euston and Aylesbury are specially good in their contrasts of light and shade. "The Landscape Element in Thomas Rowlandson's Art," by Frank Gibson, who considers that "it would hardly be an exaggeration to say that Rowlandson was a true successor of Hogarth as a pictorial satirist," while his mastery of line and tint entitles him to a foremost place among English water-colour artists. Rowlandson's method was that derived from the Dutch masters of the seventeenth century, who used pen outlines in conjunction with simple washes of colour, and the examples illustrated are marked by their life and vigour. But the most interesting feature of the "Studio" is Malcolm C. Salaman on the work of the Goldsmiths' School of Art at New Cross. The school has been latterly developed on the purely artistic side, and much attention has been devoted to etching under the general direction of Sir Frederic Marriott, with the result that some work of extraordinary promise has been achieved which is illustrated by a number of reproductions of very able work, among which may be specially noted "Samson Pulling down the Pillars of the House," by W. A. Narbeth; "The Sale Room," by Molly Campbell; "The Festival," by M. Brough; "Saturday Night," by Winifred Daniels; and a piece design for a Dramatic Authors' Club, which we reproduce.

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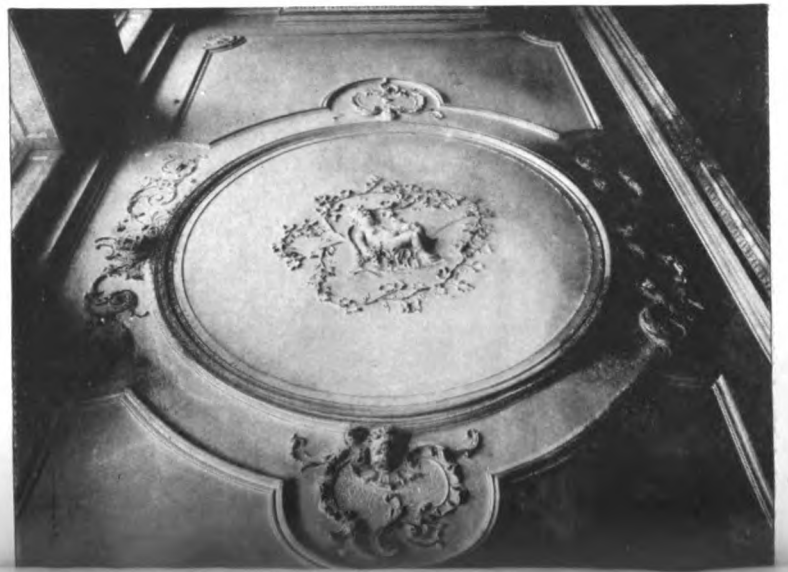
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Four Illustrations from the "ENGLISH HOME."

By J. ALFRED GOTCH (Messrs. B. T. BATSFORD, Ltd.)

THE GARDENS AT WREST, BEDFORDSHIRE.
CEILING—No. 16, BISHOPSGATE STREET WITHOUT.
SHOPS—MONTPELLIER, CHELTENHAM.
GATE PIERS—COLESHILL, BERKSHIRE.

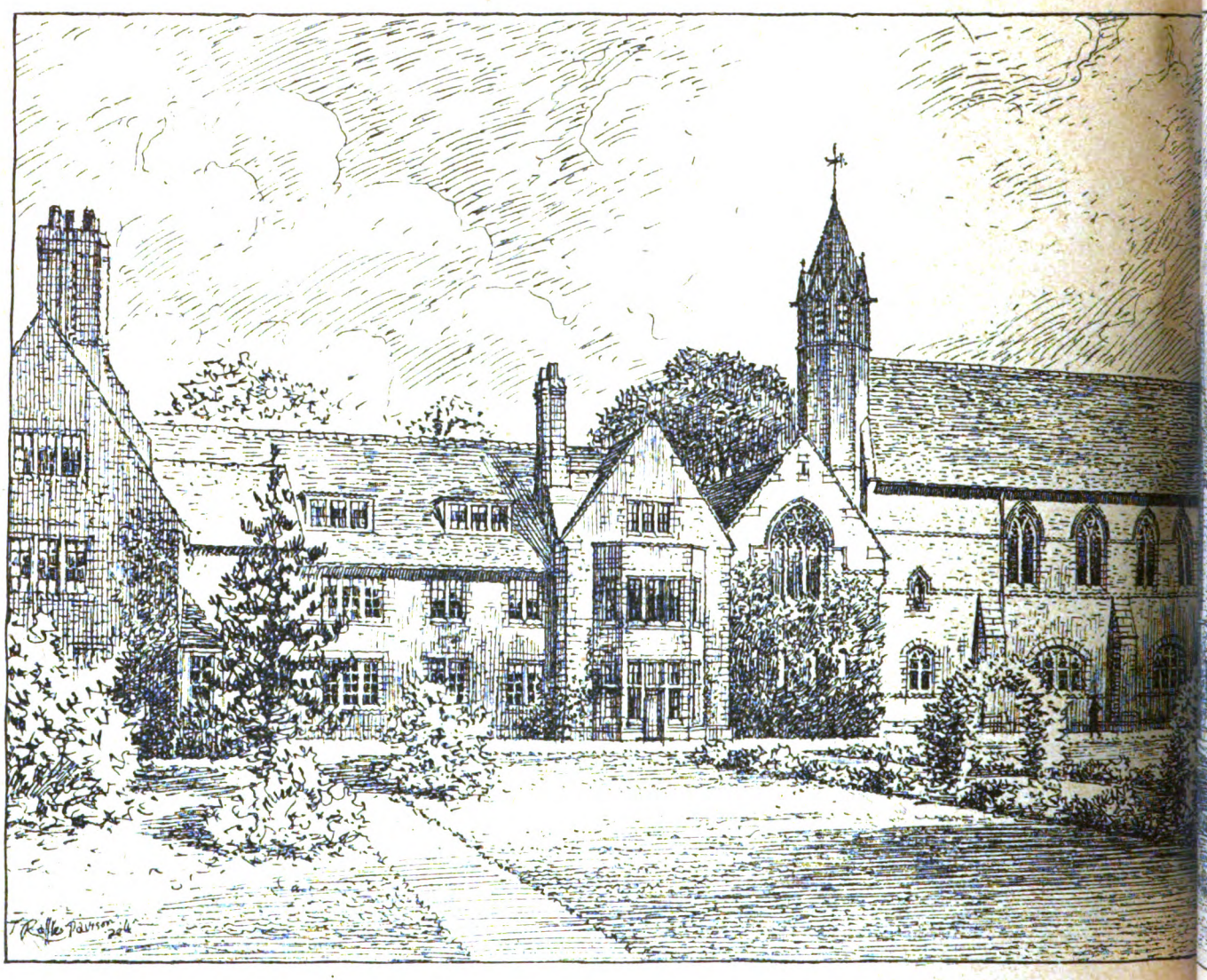




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·ALL·SAINTS·SCHOOL·BLOXHAM· ·PROPOSED·ALTERATIONS & ADDITIONS·



HEADMASTER'S HOUSE ENLARGED

CHAPEL & LIBRARY BY THE LATE G.E.

SIR ASTON

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1918.

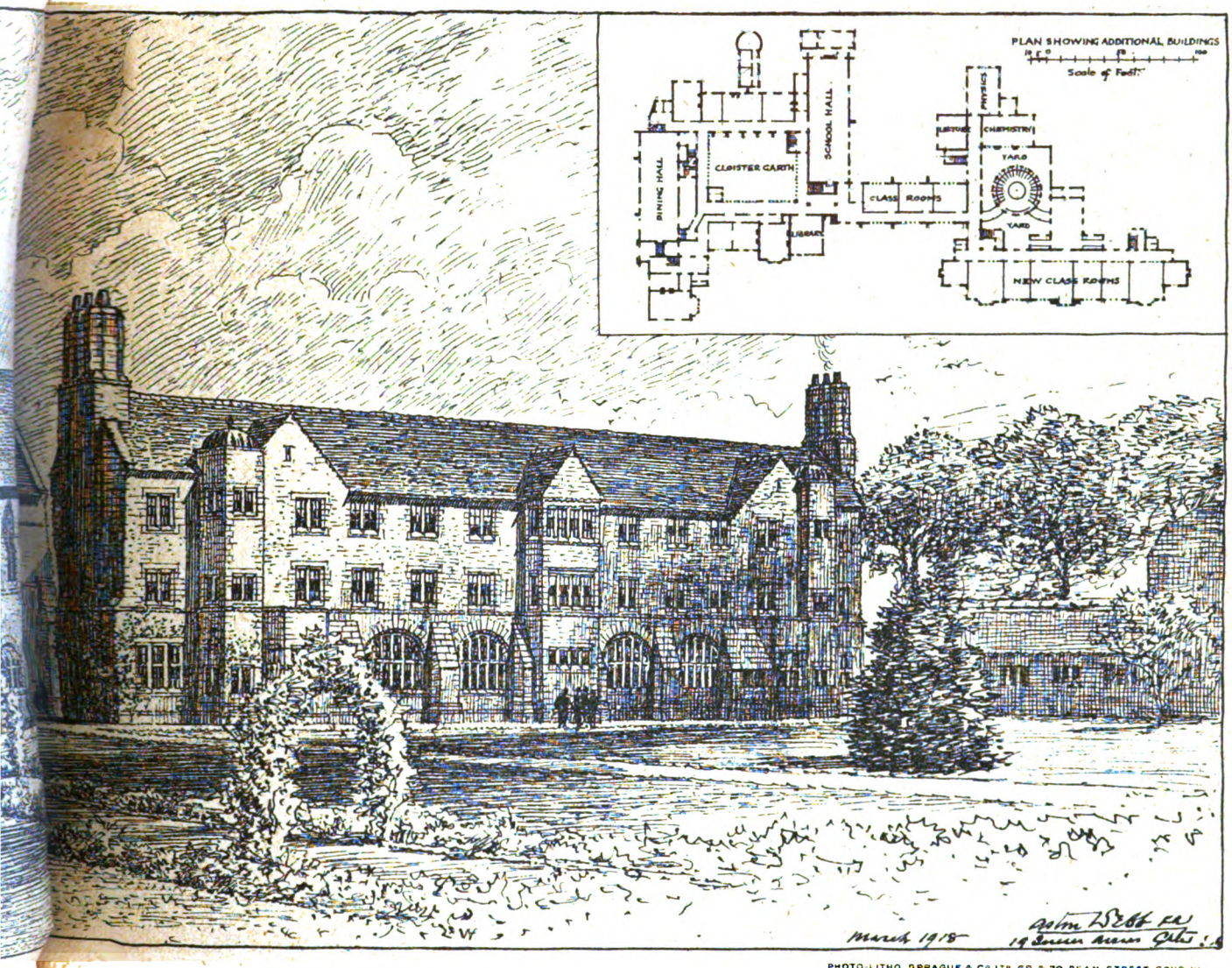


PHOTO-LITHO SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

PROPOSED NEW BOARDING HOUSE

SWIMMING BATH ETC.

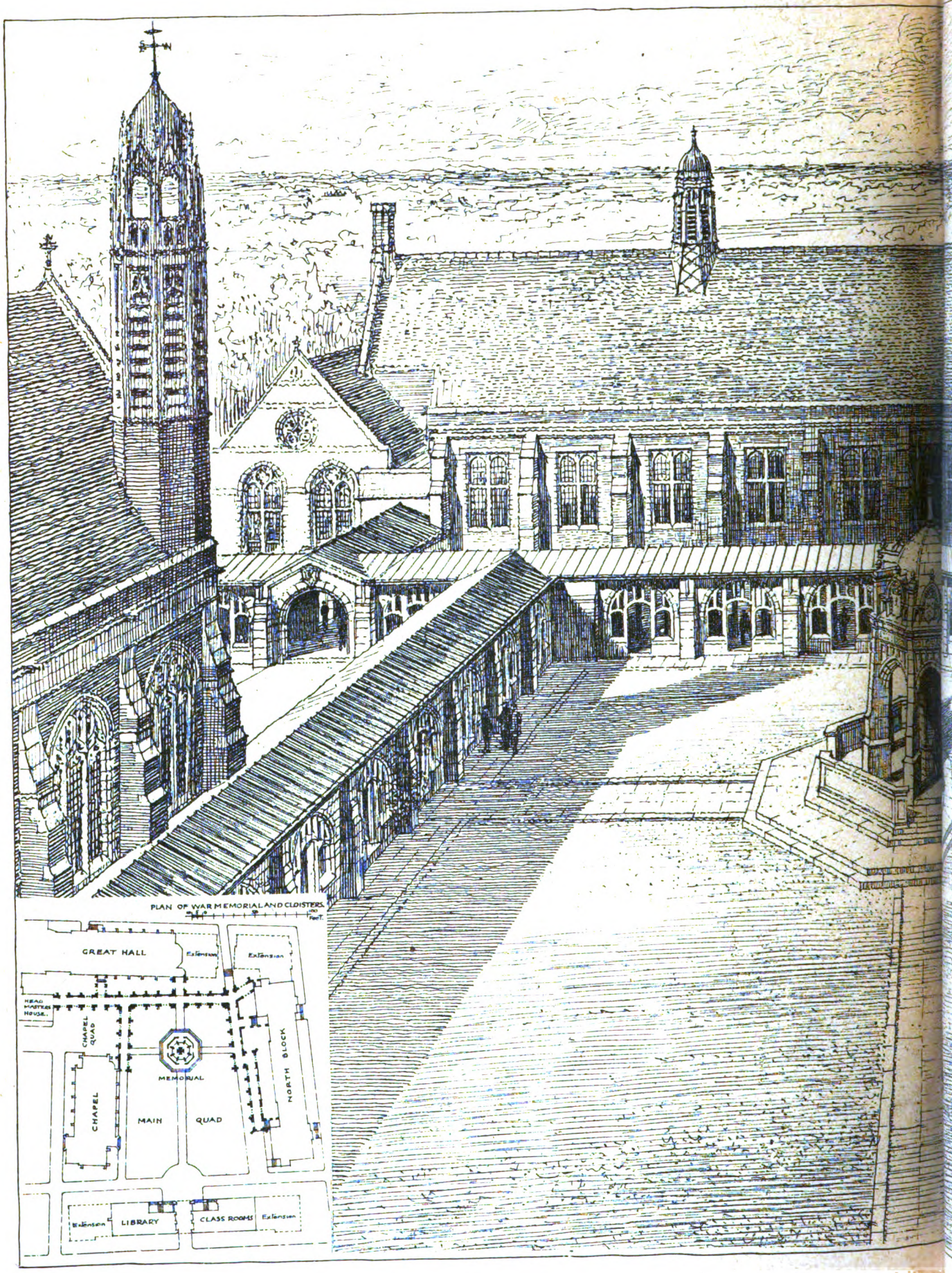
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·THE LEYS SCHOOL · CAMBRIDGE · PROPOSED MEMORIAL ·



·BIRDS EYE VIEW

·SHOWING PROPOSED MEM

SIR ASTON WE

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4th 1918.

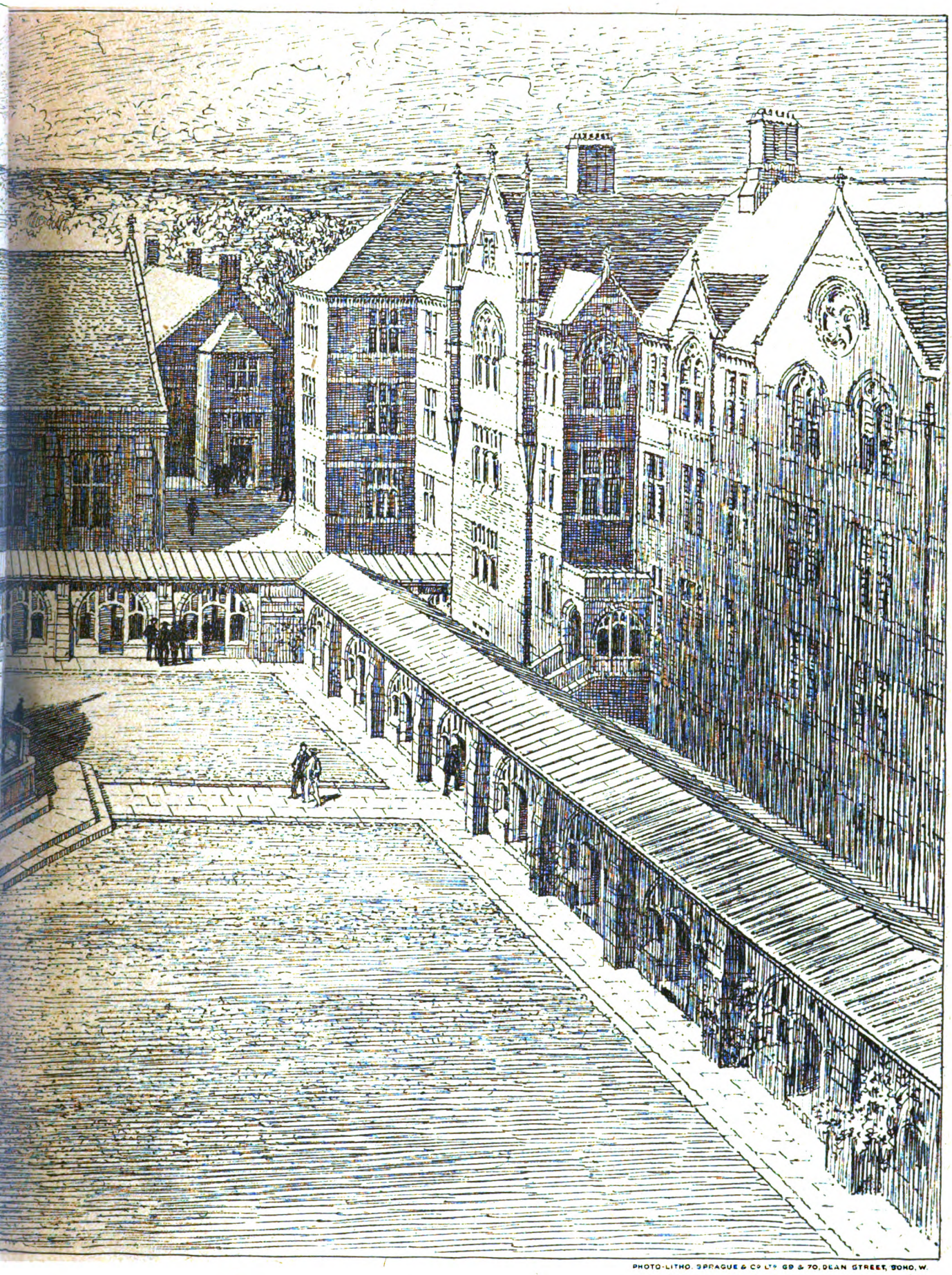


PHOTO-LITHO. SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

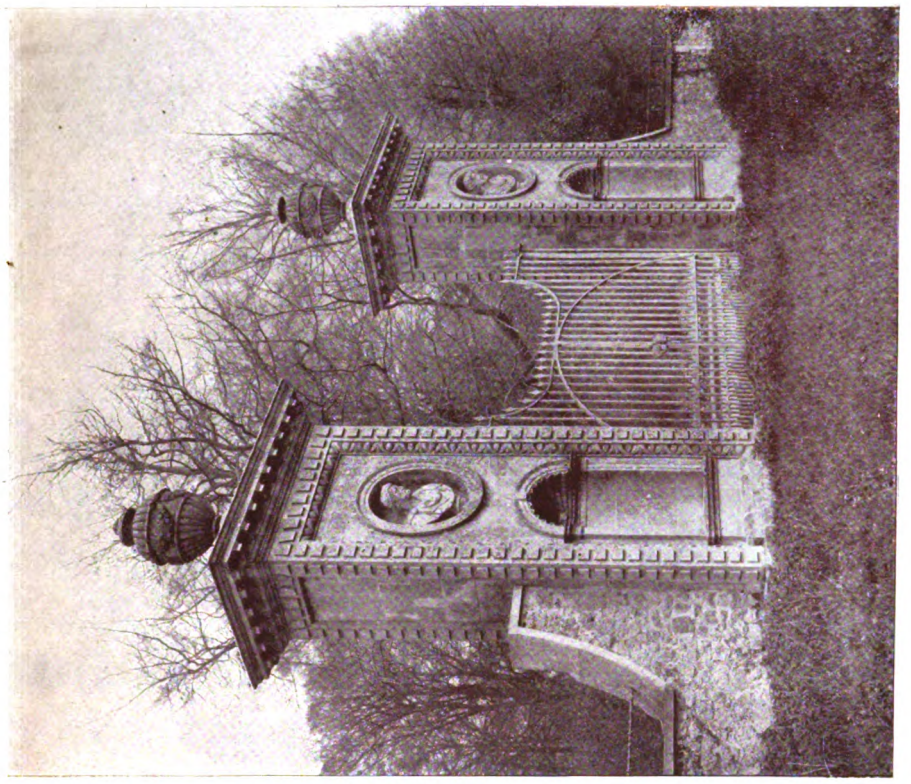
ADRANGLE.

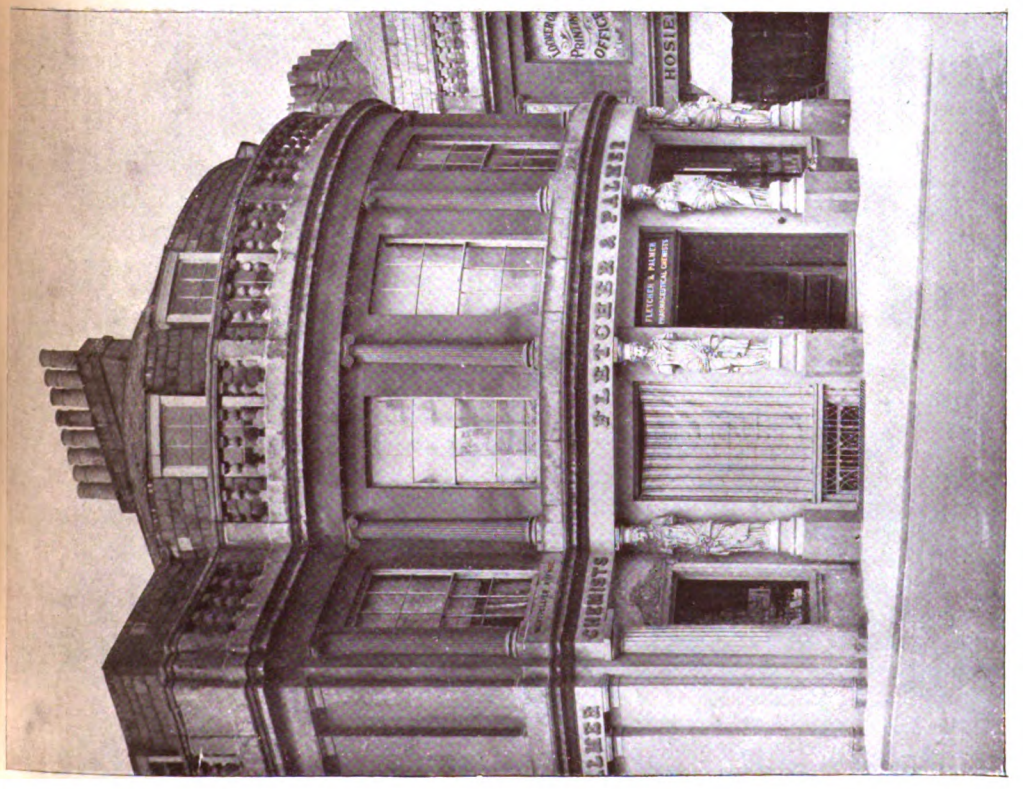
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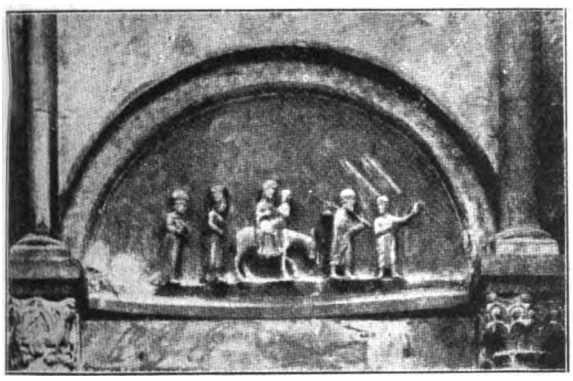


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FLIGHT IN EGYPT.—By Benedetto. Baptistery of Parma. From "Beyond Architecture."

Books.

"Beyond Architecture." By A. Kingsley Porter. (Boston: Marshall Jones Company. B. T. Batsford agents for the sale in the United Kingdom. Price 10s. net.)

Under the title "Beyond Architecture" Mr. Kingsley Porter has written what may be best described as a series of brilliant and luminous essays which carry on the teachings of Ruskin, and are marked by the same enthusiasm, the same intolerance, and the same love for a great phase of beauty in artistic expression. The book is divided into several chapters the titles of which are Against Roman Architecture, Art of the Middle Ages, Gothic Art, The War and After, The Gothic Way, French Gothic and Italian Renaissance, The Art of Giotto, Paper Architecture, and Art and the General. Such books are very valuable to all who wish to understand and feel the appeal of architecture, and form a valuable corrective to the sterilising influence that is often produced by systems of instruction and by the routine imposed on us by the modern world. They are valuable also because they show that without a knowledge of literature and of history—the broadening effect of which illuminates and explains phases of past life—we may often misconstrue the evidence of the past. The best of the essays are those which explain the author's enthusiasm for mediæval art; the weakest are those which are generally damnatory of phases of expression which Mr. Porter's strong bias prevents him from understanding or appreciating. He fails to grasp the fact that the Renaissance came not because of the moral and æsthetic degeneracy of mankind, but because evolution produced conditions which could not be rendered in mediæval terms. In his glowing and luminous appreciation of the culmination of French Gothic in the Ile de France he overlooks the fact that a great gulf yawns between these matchless buildings and what was being produced elsewhere. The west front of Salisbury, for instance, is as purely a misleading architectural screen to what lies behind it as any Renaissance front ever built; the endless rows of arcading as purely unmeaning decoration as any similar ornamental methods applied in later times;



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and like criticism applies to many of the well-known buildings of the thirteenth and fourteenth centuries. Gothic architecture in its highest development is a wonderful example of the perfect expression of structure, but it is of one great building, the cathedral, and it is applicable only to certain limited purposes. Most of our great churches had been built in mediæval times, and when the Renaissance came the wants of mankind were chiefly limited to the solution of problems for which the Gothic builders would have had no more wonderful solution than their successors, though the treatment of detail would have been different. In the same way the religious imagery which Mr. Porter so eloquently explains was natural and inevitable in a certain phase of the world's religious beliefs, and would have been more unmeaning and false than the forms by which the Renaissance was expressed had they been perpetuated in later ages. We are inclined to say that certain conditions of life and belief, and even the difficulties put in the way of our forefathers, produced a culmination of æsthetic expression which in many ways has never been equalled since, but that without a broader degree of sympathy and understanding of conditions we may take a false and misleading view of architectural art. What we want is to learn from the author how to appreciate the work of the Middle Ages, and from such a writer as Geoffry Scott how to understand the work of later ages, but the author of the Architecture of Humanism is too logical and wide-minded to make out a case by belittling that of his adversaries.

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But the book is full of good things, especially the wonderfully graphic manner in which the meaning of Gothic forms and combinations is expressed, which, we gather, are largely based on M. Mâlé's writings on mediæval iconography. Mr. Porter's essay on "Paper Architecture" is one which every architect should read, as it expresses profound truths too often overlooked. But the gratitude of all should be given to one who has an arresting quality of eloquence inspired by passionate enthusiasm and singleness of aim too often lacking now and at all times. The book is illustrated by a few well-chosen and beautifully produced illustrations.

"The English Home, from Charles I. to George IV." By J. Alfred Gotch, F.S.A., F.R.I.B.A. (B. T. Batsford, Ltd. 30s.)

Mr. Gotch always adds to his reputation as an architectural writer when he gives us a new book, and the present volume is particularly interesting, as it forms a continuation of the author's works on the Earlier Renaissance and the Tudor House, and brings the story of the development of domestic architecture down to the threshold of the age in which we live.

The period covered is so rich in examples that each of Mr. Gotch's chapters form a précis of the result of a thorough study of many books and buildings, and we feel it would be impossible to give a descriptive review which would give an adequate picture of the scope and character of a notable book, and it is therefore preferable to generally summarise impressions formed through a study of its pages.

It will appeal to the growing number of educated amateurs who take interest in architectural matters, to the student of architecture, who will find in its pages an excellent and exhaustive text book on which to build a specialised study of some of the phases of design dealt with, and to the architect in practice, who may learn much from Mr. Gotch's analysis of the past history of domestic design in England.

The summary of the divisions into which the work is divided give an idea of the great amount of detailed study which it has involved. They are: I., Introduction; II., The Change in Style; III., Inigo Jones; IV., The Drawings of Inigo Jones and John Webb; V., The Transition in Minor Buildings; VI., Sir Christopher Wren; VII., Some Further Work of the time of Charles II.; VIII., Great Works and Gardens of the Early Eighteenth Century; IX., Georgian Houses; X., Smaller Houses, Town Houses, and Exterior Features; XI., Decoration and Interior Features of Eighteenth Century Houses, to which is added an appendix dealing with the contents of the note books of Sir Roger Pratt, the architect of Clarendon House, which the author had access to after he had completed the writing of his book. The enumeration of these divisions will show that it would be impossible to do justice to more than one division in the space of a general review. Among many terse expressions in the book one is especially happy: "Architecture, though apparently the most permanent of all the arts, suffers most from change. Buildings may remain, but the purposes for which they were designed either cease or become so modified that the buildings become unsuitable. Then follow degradation, decay, or even destruction: at the luckiest a diversion from the original purpose." This one sentence crystallises the reasons which make architectural analysis at once the most difficult and most interesting of all branches of historical research, necessitating as it does a wide acquaintance with and study of the social and other conditions which prevailed in past times before conclusions can be arrived at.

The Introduction gives a general survey of the whole scope of the work from the times when a house ceased to be a fortress, and was built for comfort rather than security. "When the great Elizabethan house was planned, the household was in the nature of a large family. It is true that the members of the actual family grouped themselves in one wing and the servants in another, but the great Hall was their common meeting place, and the relation between the heads of the household and their servants were more affectionate than they became in later years. All the rooms moreover were intended for daily use, however finely they were decorated. The whole effect was one of stately homeliness." In this sentence the abiding charm and appeal of the Elizabethan type is well expressed.

By the time of Queen Anne the servants had been relegated to basements and attics, and our greater houses were built like those of France and Italy, in a large measure for display. The detached or widely-extended wings which flanked the centre block, the balancing of kitchen by stable wings for purposes of symmetry, and the cold formalism of many of the great houses, like those of Blenheim, Castle Howard, and Eaton, Nesfield and Houghton, separate the greater works of the later period further from our wants of to-day than were the houses of a preceding epoch. Our architects, when confronted with the greater essays of domestic design, may in fact be said to tamely follow in the wake of the French and Italian architects, who built great monumental palaces while they had largely dispensed with the traditional sobriety and appropriateness of indigenous English tradition.

As is abundantly demonstrated in the volume under review, it is rather the smaller works of country designers in which traditional methods were followed, modified by the permeation of new ideas to which we owe the wealth and treasures of English domestic work in the eighteenth century. The streets of many of our provincial towns, the older by-ways of London and country districts, afford plentiful examples of quiet, well-conceived designs, carried out when the architects like Vanbrugh, Hawksmoor, Kent and others were designing ambitious palatial-like structures, the utilisation of which has now become a difficult problem to their possessors. What may be called the intermediate masters of design, Wood of Bath, Carr of York, and the Brothers Adam in London, have indeed left us fine examples of their skill, but it is chiefly men of lesser note unknown to fame who solved the problem of the fusion of classical influences with the body of English tradition, and the study of whose work is so valuable as a starting point on which we can build the architecture of modern England.

Mr. Gotch's survey of the gradual influx of the teachings of the Renaissance and the influence of books on design on English domestic work is most interesting. He gives a succinct account of the Smithson collection of drawings of Inigo Jones' and John Webb's collections. Without detracting from the reputation of Inigo Jones he offers convincing proof that many of the buildings attributed to the master, especially the design for the Whitehall Palace and King Charles Block at Greenwich Hospital, were indisputably the work of Jones' follower and admirer, John Webb, whose influence on English architecture has been somewhat unduly overlooked in the past. The Banqueting Hall at Whitehall, built between the years 1619-22, is, as Mr. Gotch explains, quite sufficient in itself, when we consider what a revolution it meant in contemporary design, to establish Jones' reputation without attributing to him work which, though of great extent and good quality, never reached anything like the same standard of excellence.

Great as was Wren's influence on the general current of English architecture, he practically carried out no domestic work, unless we include Hampton Court in the category, and no subsequent architect approached either Jones or Wren in their attainments, though Wren's ability was discounted before his death by men whose ability was relatively inconsiderable.

Every phase of the period referred to is amply and fully illustrated by plans, photographs and details; the 319 illustrations given have been excellently chosen, and show both the exterior and interior detail described and referred to in the book.

As usual the production of the book leaves nothing to be desired, and proves that Herbert Batsford left behind him those who are well able to sustain the reputation which will always be associated with his name.

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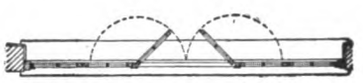
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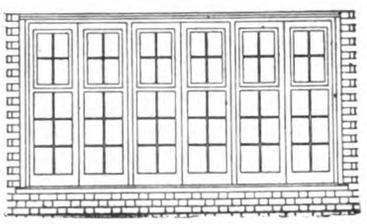
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ELEVATION: Windows closed.



PLAN: Left Casements folded back, Right partly folded.

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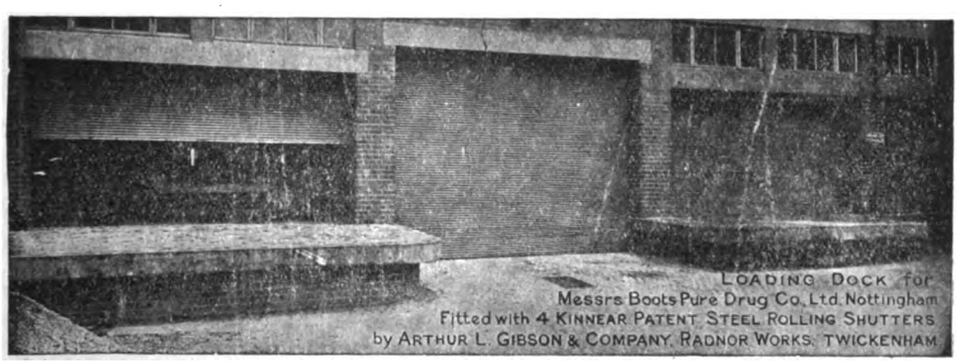
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BUILDING MEMORANDA.

The death is announced of Mr. H. Stephenson, of the firm of Hill & Stephenson, builders, Hull.

The death is announced of Mr. Caleb Roberts, of Brierley Hill, Staffs, who was killed at his works, a boiler, which was being hoisted into position, falling upon him.

It has been decided by the Newcastle Water Company to increase their plant to enable them to take from the Tyne a daily quantity of eight million gallons of water.

The Birstal Urban District Council have under consideration a scheme for the erection of Council offices and public assembly hall in Market Street.

A brass memorial tablet has been placed to mark the birthplace of Robert Dick, the distinguished geologist and botanist.

The Town Council of Aberystwyth have referred the question of a hydro-electric scheme to the Public Works Committee for report.

The Bournemouth Gas and Water Company are to promote a Bill in the next session of Parliament to enable them to carry out extensions at the Poole gasworks.

The borough surveyor of Cardigan has been authorised to carry out the reconstruction of the drainage at the public buildings.

The Burton-on-Trent Town Council have decided to purchase a site of 100 acres on which it is proposed to erect some 300 to 400 houses.

The death is announced as taking place at Otley of Mr. John Henry Wall, architect, aged sixty-four. Mr. Wall was a native of Keighley.

The Military Medal for gallant conduct in the field has been awarded to Sergeant William Stewart, Gordon Highlanders, brother of Mr. William Stewart, builder, High Street, Aberdour.

The Joint Council of the South Wales and Monmouthshire Building Trades Federation have resolved that the new rules and regulations to govern the administration of the Council shall become operative as from November 1.

The Bamford Parish Council has approved the proposal of the Chapel-en-le-Frith Rural Council to apply to the Local Government Board to erect twelve houses in Bamford under a housing and town planning scheme.

Messrs. John Purser & Sons have secured lease of premises in Castle Street, Bristol, from the Corporation provided they expend a sum of £3,500 on rebuilding as soon as conditions will permit.

The old inn known as the Cat and Fiddle at Buxton has been purchased by Mr. Herbert Frood of that town, who it is stated after the war intends to rebuild in Swiss chalet style.

Messrs. Chas. Nelson & Co., Ltd., cement manufacturers, applied at Southam Sessions last week for ejectment warrants against five men who had left their employ and the cottages they occupied were urgently required for men who were filling their places.

The Bridlington Town Council have unanimously decided to support the application made by the Harbour Commissioners to the Treasury for a grant of £40,000 for the purpose of carrying out the proposed developments at the harbour.

On Friday last an interesting function took place at the Hall of the Worshipful Company of Carpenters when the chain of office to the new Sheriff of London was presented to Mr. Banister Fletcher, F.R.I.B.A. A souvenir album was also handed to the new Sheriff containing the names of the subscribers.

The Board of Trade have confirmed the Lancashire and Yorkshire Formby Light Railways Order, 1918, made by the Light Railway Commissioners authorising the construction by the Lancashire and Yorkshire Railway Company of light railways at Formby, near Southport. The total estimated cost of the scheme is about £63,000.

The Tamworth Urban District Council propose to prepare a scheme for the erection of thirty-six houses in Bradford Street in accordance with the Local Government Board's requirements, and that provided suitable sites could be obtained, a scheme be prepared for the erection of a further fifty houses, and that negotiations be opened for the acquisition after the war of sufficient land for the purpose.

The Birstall Urban District Council have under consideration a proposal to erect a block of buildings on land in Market Street adjoining the recreation ground, as a war memorial, providing accommodation for Council offices and an assembly hall, and the surveyor has been requested to prepare a complete set of plans showing how the site might best be used for the purpose named.

The Greasbrough Urban District Council have approved plans, submitted by Mr. James Totty, architect, Rotherham, for the erection of a public hall, Council offices, caretaker's house, &c., as a war memorial, a site for which has been given at the junction of Main Street and Coach Road. The plans provide for a public hall capable of seating 289 persons, with platform, ante-rooms, cloak rooms, bathrooms, lavatories, accommodation for the Council, clerk, and staff, and a caretaker's house.

A conference on Interim Industrial Reconstruction Committees will be held under the auspices of the Industrial Reconstruction Council on Tuesday, October 8, at 6 p.m., in the Hall of the Institute of Journalists, 2 and 4 Tudor Street, E.C. 4. The subject will be introduced by Mr. W. Henderson Pringle, of the Ministry of Reconstruction, after which the discussion will be open. No tickets are necessary.

A builder sought the advice of Mr. Chester Jones at the Lambeth Police Court last week. It seems that he had fixed a stove in the wrong house and that when he had discovered his mistake the tenant refused to permit him to remove it. Mr. Chester Jones, stated in reply, "It is fixed to the freehold. I don't think you have any right to remove it. If you have any remedy at all you must go to the County Court."

At the Powys Hall, University College, Bangor, Professor Abercrombie, of Liverpool University, delivered an address last week dealing with house construction in Ireland and parts of Wales. The lecture was delivered in connection with the Welsh Housing and Development Association, and was illustrated by an interesting series of lantern slides.

The Willesden District Council have passed plans submitted by Dr. G. F. Buchan for alterations at 379-381 High Road, Willesden Green; by Mr. Codrington for motor-lorry house and additions to Dollis Hill Works, Dudden Hill Lane; by Mr. W. Lawton for a mess room at the Crypto Electrical Works, Acton Lane; by Mr. Sydney Grainger for extension of boiler-house at factory in Cumberland Avenue; by Mr. W. Frant Brown for additions to Welbeck Works, Kimberley Lane; and by Messrs. Haymills for additions to works in Dog Lane.

The following faculties have been granted in the York Consistory Court. To the Vicar and churchwardens of Brotherton to erect on the south wall of the nave of the church a brass memorial tablet, bearing the inscription: "In loving memory of Hugh Aldersey, Captain, the Cheshire Yeomanry, eldest son of Hugh and Evelyn Aldersey, of Aldersey, Cheshire, and agent to Sir J. Ramsden, Bart., for his Byram estate. Born December 28th, 1888, killed in action in Palestine March 10th, 1918. He died as he had lived, doing his duty." To the Vicar and churchwardens of Norton to insert a stained-glass window in the east end of the north aisle of the church, bearing the inscription: "This window is dedicated to the memory of Christopher Jackson Chapman, Vicar of this parish, 1881-1906."

An agreement covering the whole of the building trade in England and Wales, for devising principles on which changes in wages, rules and conditions of employment shall be made during the war, or for such further period as may be agreed upon by the parties, has now been completed. Under its terms, general wages applications are to be settled by the Committee on Production every four months. All Government departments and their contractors, and all employers of the building trade, labour engaged on Government work directly or indirectly, are to adhere to the recognised rules, rates, and conditions, and any variations can only be made on the recommendation of a conciliation board with power to appeal to the next higher board, and ultimately to the national board.

The Rotherham Corporation Act which has recently received the Royal Assent confirms, among other things, the agreement between the Mexbro' and Swinton Tramway Company and the Rotherham Corporation by which from October 1 the Rotherham Corporation will become the owners and operators of the electric-light undertaking in the urban districts of Rawmarsh and Swinton. Arrangements have also been made for the linking up of the electrical undertaking of the Rotherham Corporation and the Yorkshire Electric Power Company, Ltd., and the Electrical Distribution of Yorkshire, Ltd., for mutual assistance and interchange of electricity on terms to be arranged. The Act also provides powers to construct a wharf at the new power station and dredge the river from Aldwarke Lock to that wharf, and to construct a dam across the river for the purpose of giving a supply of water for circulating purposes in connection with the new power station, and to erect a bridge across the canal and Rawmarsh Road to link up the Great Central Railway with the power station.

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THE ARCHITECT
AND CONTRACT REPORTER

VOL. C.—2599. OCTOBER 11, 1918.

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After the War.

THE victories which have attended the Allies' arms from Belgium to Palestine have at last brought the end of the war within our horizon, but they cannot be attributed either to statesmanship of a high order or to masterly organisation. We owe a great debt of gratitude to the immortal Expeditionary Force which at the cost of every sacrifice formed a barrier behind which the new armies could be organised, and afterwards to the deeds of those armies of citizen soldiers who with our Allies are winning victory out of the very jaws of defeat. It is natural that at this stage our thoughts should now be largely directed to the problems of peace which may be with us at no distant date, which are only second in importance to the conditions which will secure a lasting peace founded on justice to all.

Without wishing to raise political issues or to indulge in controversy, there seems to be one dominant question which must be definitely solved before long—which is, whether we want organisations which have been built up for purposes of war continued and crystallised as a feature of our normal life. Are we to get rid of departmental control, or to become a nation directed by officials to as great an extent as the Prussia of the past?

New departments have been created for purposes of the war, existing departments have been enlarged with the same object, and a large section of the population who have found lucrative employment in such departments will fight for the maintenance of a system which suits their personal ends. They will have the support of the political bureaucrats who wish to magnify their functions, of the enthusiasts who believe they can create a new heaven and earth if endowed with power, and of the socialists who eagerly support every extension of State control, believing that by so doing they are preparing for the labour domination of the world.

Dr. Addison's plans are based on the continuance of control and its extension to fields hitherto undreamed of. The proposed Ministry of Health is believed to include among other provisions the conversion of the great bulk of the medical profession into civil servants, and the taking over of hospitals as State institutions. All this will, it may be noted, have to be paid for by the taxpayer, who already bea rs the greatest part of our financial burdens. The heads of the Ministry of Reconstruction and of the Local Government Board give addresses in different parts of the country urging the necessity of a huge scheme of housing, to be paid for again out of the taxation, municipal and local, of a small class of the community. The suggestion that the shortage might be met as it has in the past by voluntary action is brushed aside as impracticable, and communities are urged if not threatened to make demands on the public funds.

Other departments we might name are ambitious to carry out large building programmes directly; some are even rumoured now to be engaged on the preparation of schemes which have not the shadow of justification of being necessary. As a corollary of these schemes we have the proposal to continue the system of war permits for the erection of buildings which it is rumoured the departments would like to extend for five years after peace, the proposal that the control of shipping is to be continued for some years after the war, while the same authorities are itching to acquire the railways, mines, insurance and other business into their all devouring maws.

Now when in our ordinary life a company or commercial undertaking seeks to extend the scope of its operations it must, before it can obtain the capital required, show that it has been a good administrator of the capital it has. If we apply such a test to our departments we shall find that they have been tried and found wanting, and we urge that it is now time that public opinion should express its absolute determination that when peace comes the authorities who rule shall restrict the scope of their activities to the field which belongs to them. What many are proposing is parallel to the suggestion that we should give a blacksmith who has shown no great skill in his proper craft the delicate mechanism of a watch to experiment upon, for the problems of this war are but child's play compared with the organisation of a new system for controlling the activities of a nation in the times of peace. The real function of a Government is simply to erect a screen behind which its citizens may carry on their business and multifarious activities in security and freedom. We want our commerce protected by wise and far-seeing legislation and effective support, we want our consular system reorganised, our interests abroad upheld, our safety ensured. And, in addition, we may add we want all our Government departments reorganised, to promote efficiency and do away with waste, and we want the burden of taxation, so heavy a drag on the productive power of a nation, lessened by every possible means. These objects, we submit, afford a sufficient problem for our statesmen and organisers, and the nation which has been so patient and long-suffering from patriotic motives during war is in no humour to give the official departments *carte blanche* to indulge in experiments.

The Government has found out what the employers of labour already knew, that trade union rules are a barrier to production. It has promised their restoration after the war, and the pledge must, if desired, be kept. It will then be for Labour to decide whether it will make it possible for Capital to pay the wages it desires. If we want to keep up with America in the race of national prosperity, Labour has only to give its consent to conditions which will make it possible for it to obtain the largest share of the good things of the earth. If not, Labour will have to pay the penalty of its mistake, and the doles and contrivances of an official-ridden community will not in the end help it.

But we are quite certain that though the great body of the people have submitted to restrictions during the last four years for one object, and that alone, they are in no humour to consent to being exploited to further the aims of theorists who have not made good their claim to be allowed to plan out a new autocracy, and that if any such attempt is made the political party or parties which try to effect it will find they have mistaken the temper of the electors from whom they derive their support. It is even possible that if they did by political legerdemain contrive to carry out their wishes they would find themselves in the position of those who in the past have passed measures they dared not put into force, for we are certain that the bulk of the people are determined that the departmental control and interference with the private liberties of the people must cease within the shortest possible time after the restoration of the peace which we all anticipate in the near future.

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Illustrations.

THE GRETNA FACTORY SCHEME.

Notes and Comments.

The President's Address at the Town Planning Institute. Professor Adshead's inaugural address to the members of the Town Planning Institute, which we give this week, is an excellent one. We are quite with him as to the necessity for considering questions of general planning before scattering new buildings broadcast over the country, but we would add that it is highly important that such schemes should be actually adopted and carried into being with the least amount of delay, because it is unfair to adopt a scheme and then delay its carrying out, as it places owners of property included in the scheme in a difficult position. They cannot build unless they build conformably to the lines laid down, but if the local authority delays in carrying out the proposed access roads, such building would frequently be made impossible. We think that the demand that the whole country should be town, or regionally planned, is a rather large order, but it would probably be feasible to lay down a general instruction that towns of a certain population should adopt town planning schemes for a belt of country round them within a given period. We quite agree that it would be far better that many of the proposed new houses should be grouped together in new localities rather than form additions to existing towns, and we hope that an effort may be made everywhere to group houses wherever practicable instead of scattering them irregularly over the country side.

The Restoration of York Merchants' Hall.

The York Merchants' Hall, which is one of the most interesting buildings connected with the mediæval gilds which remain in this country, had suffered as such buildings do when they fortunately survive, by numerous additions and alterations of a disfiguring character. Through the munificence of Mr. Leetham, a Worshipful Governor of the Company, the domestic apartments which front the Hall have been carefully restored to their original condition, by the removal of wallpapers and coats of plaster which hid the old oak timbers. The beams themselves have been carefully scraped and cleaned, modern grates removed and their place filled by steel dog grates, while Mr. Leetham and other members of the Company have lent valuable furniture and pictures to furnish the rooms. The restorations also include a room adjacent to the restored council chamber, in which a collection of water-colour sketches of old York have been hung, and the outer hall with its staircase to the chapel below has been cleaned and rearranged. The only parts of the building now needing attention are the vaults and cellars, which formed part of the Company's warehouse in connection with their oversea trades. Dr. Maud Sellers, who has done so much in connection with the records of the Company, and who is now acting as hon. curator, has assisted Mr. Leetham in the work which has been so well completed. At a later date we propose to give an illustrated article on this very interesting Company and its buildings.

The London Master Builders and Aircraft Industries Monthly Letter.

The London Master Builders feel much anxiety about the tendency which is so strongly manifested to increase wages without any real justification, and the representative of a Government Department recently made the statement that "we are now coming almost to the breaking point. I feel that we are coming to the breaking point so far as wages are concerned, and I think every Government Department feels the same thing. There are a great many jobs now hanging in the balance, and if wages go up very much more I feel sure they will shut down, and there will be a severe cutting down of the building programme. I really think that by asking and continually agitating for excessive wages and allowances the workmen are ill-advised; in fact, they are killing the goose that lays the golden eggs." The London Master Builders subsequently refused an application from the London District Committee of the National Union of Operative and Heating Engineers, who applied for a flat rate of 2*s* per hour, which they were informed could not be entertained.

Everyone connected directly or indirectly with building has received such big advances that we can well understand the anxiety of employers, and, we may add, the public. Unfortunately the trade unions are not sufficiently alive to means of helping conditions all round by improving methods, in connection with which we may mention the experiment recently made in America by bricklayers. By a different system of handling bricks it was proved in practice that 30 men could lay as many bricks in a day as 100 working in the old manner. We do not mean to say that equal improvements are possible all round, but there are certainly means by which production could be increased, the greatest advantage of which would be the high wages it would justify. Unless the new Trades Councils can promote such an understanding we are afraid it will be impossible to look hopefully on the future of many industries.

Department of Civic Design, Liverpool University.

The courses of instruction in the subjects of Town Planning and Housing began on October 8. The urgent need for a systematic study of this subject need not be emphasised at this moment. It is well known that the present Government propose that half a million houses shall be built during the period of reconstruction after the war, and it is essential that full consideration be given to the best way in which the houses shall be planned, grouped, and disposed in relation to existing towns and villages. The Liverpool Department of Civic Design offers facilities for studying these pressing problems by means of a well-equipped library, which includes all current literature bearing on the subject, and courses of lectures, which cover every aspect of the subject: economic, sociological, architectural, landscape, engineering and legal. The first part of the course, leading to a certificate, includes the Autumn and Lent Terms of this session, and aims at giving a general outline of the subject, accompanied by practical examples worked out by the student. The diploma, which may be taken at a subsequent session, is concerned with original design and advanced study.

The Department has recently moved to new quarters, at 61 Ashton Street, opposite the New Arts wing of the University, and ample accommodation will there be found for studio work, and private study and research.

The composition fee for the Certificate Course is £6 11*s*. This includes the following Lecture Courses:—

A. Outlines of Town Planning and Housing. By Professor Abercrombie. B. Civic Engineering. By Sydney A. Kelly, F.S.I. C. Civic Law. By H. Chaloner Dowdall, B.C.L., Barrister-at-Law. D. Landscape Design. By Thomas H. Mawson. Also the use of the studio. We are sure that Professor Abercrombie is one of those who are well able to instruct others in the subject of which he has so great a mastery, and that students who are able to attend the Liverpool courses will find their time has been profitably spent.

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The Town Planning Institute.

Inaugural Address by Professor S. D. Adshead, M.A., F.R.I.B.A., President.

It is with mingled feelings of hope and responsibility that I accept the honour you have conferred upon me in electing me your President for the ensuing year. Of hope in that we are at the threshold of reconstruction, where the first glimmer of a new world can be seen. Of responsibility in that the objects for which this institute was founded are in their realisation more closely connected with problems of reconstruction than are those of any other institute or body of a similar kind.

I am reminded also of the skill and devotion with which the duties and responsibilities of this office have been conducted by my predecessors, and here confess to something of the modest feeling of the novice in the presence of experienced men. We are a young institute, but a young institute in strong and vigorous health. Our membership is continuously increasing, and in the eyes of older institutions and similar bodies that measure of respect which is our due grows as we gain strength.

At our last annual general meeting our late President reviewed the work of the past session. I will not therefore spend time in a recapitulation of what was then said. In considering in what way I could with greatest advantage address you, it occurred to me that in view of the epoch-making hopes and anticipations that the immediate future holds forth, that I could not do better than direct your attention to some of those immediate issues in reconstruction which relate to the problem of town planning, and which will have a direct bearing on our deliberations during the forthcoming session.

It must be a matter of congratulation to all of us to know that a regeneration of housing conditions is today acknowledged by all parties and on every hand to be the most important of the many questions that relate to social and national reform, and it should be a matter of rejoicing amongst us to see in what prominence the Prime Minister in his recent speech at Manchester placed Housing.

It is my opinion, and it always has been, that the cost of food and wages and the price of the bare necessities of life will ultimately adjust themselves to the value of labour and material that will have to be expended on the erection of a working man's house, and that as a basis of reconstruction it must be within the competency of every working man to live in a house which, in regard to its surroundings, accommodation, and appearance can admittedly be described as a home. The national conscience is alive to this, and this is the foundation upon which all other reforms in social reconstruction must be built.

Now with regard to constructive measures to meet this national reform. I for my part consider that the Local Government Board, who are responsible for the housing conditions of the working classes throughout the country, have put forward a scheme for meeting the difficulty which is reasonable, practical, and progressive, in so far as it is likely to meet with general acceptance and be adopted. If in the eyes of this institute it has shortcomings, they are concerned with the town planning issues that are involved. Although it is laid down that housing schemes should be prepared on town planning lines, this is not quite the same thing as making it a condition that they must form part of a town planning scheme. We are particularly interested in seeing that housing schemes fit in with the requirements of the comprehensive town plan, and there is some danger that in certain cases houses will be wrongly placed.

During our recent discussions we have devoted a good deal of our time to considering in what way town planning by Act of Parliament could be remedied in order to put some impetus into schemes. Experience having proved that the Act as it stands is a very slow-going machine, our late President, with his unique experience and legal knowledge, has rendered very valuable assistance to this institute in drafting some short cuts in procedure, and generally in showing us how we might dispense with a great many unnecessary wheels.

But apart from the complexities of its administration, much of the delay has no doubt been due to the exacting new duties that have been laid on the shoulders of the officials of local authorities as a result of this protracted and terrible war. Much also is no doubt due to the absence at the front of the official staff. But still this does not explain how, out of several thousand local authorities, after a period of nine years, only a few hundred have made application to prepare a scheme. I am inclined to think that the delay must generally be ascribed to the unimaginative outlook of the average local authority, to their fear of incurring expense in regard to matters that appear to them somewhat hazy, and to a real ignorance of what town planning entails and means. Our propagandist associations have done much in the way of disseminating a knowledge of the subject; their work should be accelerated, for, far from having completed their work, a real commencement has only been begun.

There is a crying need for a better and amended Town Planning Act; with such a measure they would have a better chance of spurring the delinquent authority on. In view of the changed conditions of the times, and the general attitude of the public towards disciplinary legislation, I am not at all disinclined to think that some measure of compulsion might not be a bad thing. Perhaps there might be set a period of ten years, by the end of which period every local authority should have its town plan. I think that any such form of compulsion should carry with it an offer to be relieved of much of the responsibility by the central authority, and that compulsion should only have reference to a limitation in time. To my mind, in view of the universal ignorance of the subject that prevails, not only amongst laymen, but also amongst officials, such a time limit ought not to be a day less than ten years, and it might be fifteen; but it is an incontrovertible truth that every inch of undeveloped England ought to be planned. What I take the strongest objection to, and it is a position upon which I shall take the firmest stand, is the adoption of that form of compulsion which, in order to evade any exercise of the imagination, lengthy discussion, persuasion with owners, and all the difficulties of negotiation upon which a really good town plan must necessarily depend: which in order to evade these things practically converts town planning into the compulsory adoption of a few new by-laws with reference to undeveloped land. There are those who hold that so long as a housing scheme is laid out with a limited number of houses to the acre, and perhaps a minimum setback between the houses, that so far as embodying the principles of town planning it is not necessary that anything more be done. My reply to all such propositions is that this is not town planning at all, it is merely a wise provision for securing open space without any consideration as to where streets and open spaces should be provided and buildings stand.

This is not an occasion to go into the question of the extent of the area that should be dealt with, nor in what way it should be made to fit in with a development plan for the whole of the country; but, as I have already hinted, unless housing schemes form parts of town planning schemes, mistakes will certainly be made; and as a corollary, it is just as true that the town plan should dovetail with the district development plan. Without doubt many town planning schemes could be prepared without reference to or fear of contravening the development plan of, say, the area of three counties, and many housing schemes can be placed on perfectly good sites that under no conceivable circumstance can prove obstructive to the wider interests of a town plan; but on the other hand, with a universal acceptance of such a watertight and parochial policy, mistakes of incalculable

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consequence are in many important cases sure to be made. I think that the Government should move in the matter of a development plan for the whole of England, but it is perfectly obvious that before this could be regarded as a responsible undertaking the question of administrative areas would have to be decided on. There is no reason, however, why a scheme, possibly in the irresponsible form of a report, should not at once be prepared, say, on the lines of the report of the Traffic Branch of the Board of Trade, which was so admirably done by Col. Hellard.

Now I propose to support this by no means original suggestion for making a development plan for the whole of England by reference to the recommendations of Government Commissions and committees that have recently reported on matters pertaining to reconstruction. But before doing so, and before leaving this question of the relation of housing to town planning, I must say that, so far as available evidence discloses the attitude of the Government, the question of scientifically locating the three hundred thousand houses which it is proposed should be built is being seriously evaded. It is a neglect the consequences of which will appear more and more obvious as sites for the last hundred thousand houses come to be found. I understand that the Garden Cities Association is considering the question of founding new garden cities to be situated in suitable areas in different parts of the country. This at any rate is an indication that I am not alone in feeling that entirely new towns should in certain cases be founded, as well as extensions and enlargements to existing ones. I am sure we shall all be interested in the work of the Garden Cities Association in this direction.

And here I would like to say I hope the Government will not confine their efforts to encourage house building to the one instrument, "the local authority." Solid encouragement will surely be given to those genuine public utility societies who up to now have certainly led the way.

For the purpose of finding out in what way the great problem of reconstruction is being considered in its relation to the making of a national development plan, and in what way the reports of the numerous committees that are at work are related to one another, I have studied and scrutinised the references, and in cases where they are available, the reports themselves, of some eighty-seven Government appointed Commissions and committees that have been considering the question of reconstruction. The reports of many of these committees and commissions have not yet been published, and others are confidential; but of those that I have seen I note that in the main their findings relate more to the solution of the questions that generally may be regarded as administrative and political rather than to the technical aspect of work to be done.

From our point of view it is a little regrettable that out of these eighty-seven committees, whose references include such subsidiary and diverse questions as "Dentists' Act" and "Irish Peat," none are concerned with such important problems as "regional planning," or the distribution, relation, and structural development of towns. There are, of course, the four committees that have been set up by the Local Government Board whose reference is "Housing," and in a secondary way they no doubt touch the question of town planning, as indeed do other committees, such, for instance, as those concerned in the improvement of the village, trade development, and power distribution. But all these seem to me to want dovetailing together by means of a development plan.

Let me for a moment direct your attention to the findings of some of these committees. Let us take the findings of the Agricultural Policy Sub-Committee whose reference was to consider and report upon the methods of effecting an increase in the home-grown food supplies, having regard to the need of such increase in the interests of national security. Of the different heads under which this somewhat lengthy report is arranged, those relating to general policy, and, in particular, those relating to village reconstruction, small holdings, transport, reclamation, and deer forests are of interest to us, and if embodied in Acts of Parliament would profoundly affect regional planning.

As is indicated by the reference of this committee, its chief concern is to make the country self-supporting as regards agricultural produce, and that in the interest of (1) national security, and (2) national interest and health. Whilst as an institute we are not concerned with such pan-political questions as national security, it is certainly to our interest to consider ways and means for securing improved agricultural transport and the revivification of village life.

The report encourages a general bolstering up of the agricultural industry. May I say that apart from trade interests and national security, the essential value of such an expediency lies, to my mind, in the encouragement it would afford to the development of a healthy population and outdoor life, and not only in regard to those living in rural districts, but also in regard to those urban people whose recent achievements in agricultural pursuits have made the question of allotments and small holdings a very prominent one in its relation to the extension of towns.

With regard to small holdings and large farms, the report points out that there is need for both, and recommends certain improvements in the Purchase of Land Bill, to enable tenants to become possessed of their land. Under the heading "Village Reconstruction," the general depression from which so many villages in remote districts suffer, and which we have all heard so much about, and some of us had experience of, is very ably analysed and reviewed. The recommendations for remedial measures are definitely stated and may be outlined as a scheme whereby the Board of Agriculture on local application, or on the recommendation of the agricultural committee for the district, should send down a valuer to report as to how a village might be improved on business lines in respect of small occupying ownerships, gardens, allotments, small holdings, cottages, cow commons, horse commons, and recreation grounds. When a scheme has been agreed upon, the cost is to be defrayed out of a loan from public funds, not exceeding a rate of sixpence in the pound. But except as regards village clubs and social institutes, which are evidently to receive the unofficial attention of the valuer, it is pointed out that schemes ought to be self-supporting.

As regards transport, the recommendations point out that the need for improved transport is both urgent and immediate. In regard to improvements in railway transport, the issue seems to depend upon better organisation amongst producers, so as to enable goods to be transported with greater convenience by being handled in greater bulk. The amount of agricultural produce carried by canals is negligible. Out of 1,794,000 tons carried by the Grand Junction Canal in 1905, only 5,812 tons consisted of agricultural produce, though 167,000 tons of town manure were carried by canal to country districts. In Belgium in the same year the proportion of agricultural produce carried by canal was, compared with all other goods, 17 per cent. So that there seems to be room for improvement in our inland waterways for carrying agricultural produce. But the greatest need for improvement is in short distance and local traffic. Here it is made clear that light railways and motor traffic need not compete, the former being necessary and more economic where counties and groups of villages are concerned, as in the case of the light railway between Headcorn (Kent) and Robertsbridge (Sussex), the latter being more economical and better suited for collecting and delivering from groups of farms. And it is pointed out that after the war the large number of motor vehicles at the disposal of the country could well be utilised for this purpose. The report also states that the industrial penetration of the countryside, which in some parts has been a feature of recent years, and which, with the improvement of telephonic and other communication and the growth of local rates in urban districts, seems likely to develop further in the future, makes it of a far wider national importance. The necessity for a prompt and ready delivery of milk, vegetables, and other agricultural produce in such districts, as well as for the transport of goods manufactured or required by such communities,

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adds to the importance of the subject, and recommendations are made "That the whole question should be made the subject of detailed enquiry and report by a special sub-committee of the reconstruction committee set up for this purpose."

Under the heads "Reclamations" and "Deer Forests," it is shown that an inconsiderate amount of waterlogged land can be reclaimed, and that of 3,600,000 acres of deer forest in 1912, 320,000 acres of this has been scheduled for cultivation in small holdings. And it is probable that much of the rest of it can be utilised for growing timber, sheep and cattle feeding, &c. I think that I may say that we all welcome any proposals that may emanate from the Government for the improvement of agricultural England, and for my own part I think that in the main the general trend of the proposals are sound. As to whether the recommendations of the report will ever be embodied in Acts of Parliament remains to be seen; but, if so, village planning as a specialised undertaking must have more recognition.

Let us consider for a moment what this village reconstruction as outlined in the report means. Who is to make a plan of the improved village and see that it fits in with any proposed new lines of communication? Is there to be a plan at all? A valuer sent down by the Board of Agriculture is to report. What sort of a man will the valuer be? Will he consider interests outside the immediate purview of the economist? In view of the penetration of industries into rural areas, which in certain districts is now rapidly taking place, this problem of the planning and improvement of villages becomes a very complex, highly technical, and profoundly socialistic undertaking, in which there should be a place for men with town planning qualifications, and who are prepared to specialise on this particular kind of work. We must not forget that if this kind of work is to be in every way successful, the scales of the economist must be adjusted to weigh in matters æsthetic and human, as well as the more material matters that can be adjusted to accord with tables of interest and sinking fund, or measured with a rule.

With regard to improvements directly concerned with agriculture, we must remember that the English farm is firmly established on lines suited to a system of husbandry by horse traction, and that it cannot readily be worked in the same way as those wide tracks of open land in the Colonies that are worked by motor traction and the steam plough. We have areas, especially in the Midlands and Eastern Counties, where with co-operative farming and a certain amount of clearance, the methods of the Colonies might prove economic and valuable. But farming is the most conservative of all industries, and we cannot look to changes of this kind either as immediate or universal.

Another report, that of the Coal Conservation Committee, contains matters of the greatest interest to us. It shows by a map where the proved concealed coalfields lie, and also all those areas where possible new coalfields and extensions exist. In the preparation of a regional survey, recognition of the potential value of these areas would be of the greatest importance, more especially in such places as Kent, where proved concealed coalfields lie. It is not too soon to commence preparing schemes for development on a regional basis here. Sites for mining villages, power stations, factories, and lines of communication by road and rail ought at once to be plotted. Planned with due consideration to cleanliness, hygiene, economy, and all the advantages that are offered by the application of modern science, and to a well-thought-out regional plan there is no reason why industrial Kent, even though it might lose some of its cobnuts, hops, and even hedgerows, should not still be a county of model villages, chalk cliffs, marshes, and hazel woods very much as we know it to-day. I feel it is the responsible duty of this institute to watch the mining developments of Kent.

This report also includes the sub-committee's report on power generation and transmission, a document that appeared some time ago and created universal interest. Its findings are no doubt well known to most of you, but it is of interest to remember that instead of the power at present utilised in this country being generated by some 600 different undertakings, it is suggested that the whole of this work could be done by sixteen, and that thereby a saving could be effected by the country amounting to over £100,000,000 annually. It is not suggested that the country should embark upon so great a change on the lines of an engineering project commencing "de novo," but that it should be arrived at as a national scheme, by a process of gradual incorporation and development.

But, it may be asked, "In what way will this affect town planning." In the first place, centres or sites suitable for electric generating purposes are to be chosen on important waterways, as the future main centres of supply for each of the districts into which the country is to be divided, and it is pointed out that the sites so chosen should be as large as possible having in view the land available in suitable localities, and should have ample water and transport facilities. Land is required not only for the power stations themselves but for processes involved in the extraction of by-products; it is also required for the development of electro-chemical processes which may most conveniently be carried on in close proximity to the power plant. Further, the country is to be traversed by a network of trunk mains or electrical roads, and I think that everyone would agree that the routes of these trunk systems ought to be considered in connection with the making of any new and important thoroughfares.

Here, then, we have a proposal for erecting what practically means a number of quite new super-industrial towns. If the recommendations of this committee should ever find their way into our legislation, which I hope and trust they will, the project is of enormous importance to us if only from the point of view of town planning.

One of the most influential of these Government appointed committees is that which has reported on commercial and industrial policy after the war. Its enquiries have had reference principally to economies in relation to international matters, but whilst its findings can only be regarded in the main as an important background to regional planning, at the same time it contains one recommendation in which our interests are very directly concerned. It refers to, and strongly supports, a recommendation of the Dominions Royal Commission for the setting up of an Imperial Development Board, which, amongst other duties, should advise on the adequacy of empire requirements of schemes of harbour improvement, studying the lines of communication by steamship, railway and cable, and which are contributory and necessary to imperial development.

Finally, let us see what proposals are being put forward by the Ministry of Reconstruction for commencing works of interest to the town planner immediately after the war. A special committee set up to consider the case of the Civil War Workers says: "We regard it as especially important that schemes such as housing and the reconstruction of roads, for which the Government is responsible, should be fully prepared before the end of the war, and that any legislative measures which may be necessary in connection therewith should be carried through so that the schemes may be put into operation without delay." And it further recommends that those responsible for the schemes should go so far as to take up contracts, if necessary, at provisional prices to be adjusted later in accordance with the rise and fall in price of materials and labour.

I can hardly see that to enter into a contract can be a practical scheme, but I do feel that the time for reflection and suggestion is rapidly drawing to a close, and that it is of urgent national importance, in view of the prospect of an early closing down of munition works, to say

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nothing of the later disbandment of the Army, that plans be prepared for definitely parcelling out works of national importance in order that those freed from war work can commence peace work without undue disturbance and delay. To find suitable work for everyone in this way will be found to be extremely difficult, and especially as regards skilled labour, but if a few great works of national importance arranged in connection with available materials could be prepared, they would act as reservoirs for labour from which labour for later matured schemes could gradually be drawn. In the case of unskilled labour a most suitable reservoir would be a few big schemes for constructing the foundations of new roads. The preparation of schemes for the construction of new main roads with the necessary arrangements, financial and administrative, for their execution seems to me to be a work of first importance, and for this reason, if for no other, a discussion such as that opened by Mr. Rees Jefferies at our last meeting was most opportune. And whilst it was shown that almost everything depends upon a reshuffling of rating areas for this particular purpose, a perusal of the reports of the Ministry of Reconstruction convinces me that the reconstruction of administrative areas extends to other matters of equal importance; in fact, everything points to the need for a co-ordinating plan and scheme. But the detailed preparation of such a plan, to say nothing of its approval, would be a work of many years, and the conditions that would determine many of the more important issues would be found to be subtle, highly involved, and difficult to envisage. This, however, does not mean that such a work ought not to be begun.

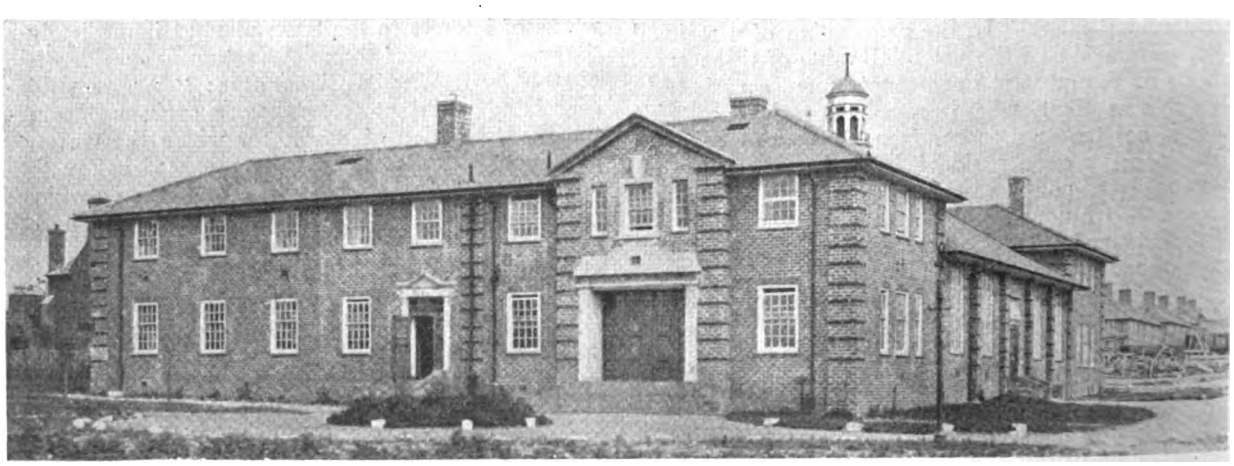
In regard to the laying-out of roads, there are many proposed schemes (as, for instance, the Western Avenue, which I am pleased to see now meets with the approval of the Road Board), in the construction of which no unseen development, sufficiently important to upset it, is involved; and, therefore, schemes for the construction of main roads, where the difficulties at present consist mainly in the fixing up of a financial and administrative arrangement, could, it seems to me, if the Road Board have not complete powers, be temporarily taken over by the Government and set going primarily in the interests of labour by the passing of a short Act. I think that the question of constructing new main roads is one upon which this institute should concentrate its main efforts.

Very much thought has been devoted by Government committees and also by private individuals to the question of the employment of disabled soldiers after the war. Opinion seems to be divided as to the relative merits of congregation and segregation, or as between settling them in villages designed to group them, or distributing them throughout society all over the land. The question is highly controversial, and threatens to be as prominent as was that which related to the separate and congregated systems of prison discipline during the early half of last century. I understand that certain experimental schemes are in operation as a result of the report of the departmental committee set up by the Board of Agriculture and Fisheries, but with what success they are meeting as yet one cannot say. It is quite clear, however, that the case of the disabled soldier is an important one, and if he is to be settled in colonies and villages here is further work in town planning.

Time will not permit of my indicating in what way the reports of the committees appointed by the Ministry of Reconstruction to consider improvement in public administration would affect our interests. But the findings of such a committee as the "Local Government Committee," whose terms of reference are "to consider and report upon the steps to be taken to secure the better co-ordination of public assistance in England and Wales, and upon such other matters affecting the system of local government as may from time to time be referred to," will surely be of interest to our legal members, as also will those of the committee on "the acquisition of land for public purposes."

In conclusion, I would like to say that the strength of this institute and its ability to promote the objects for which it was founded will depend very much upon the expansion, cohesion, and enthusiasm of its membership. Those of us who meet during our monthly discussions in this room are most of us well known to one another, but we have many members, especially in the North of England, whom we have never seen. I hope, if it can be arranged, to hold some time during the forthcoming session a meeting either in Birmingham, Manchester or Liverpool. I believe that there is great value in social intercourse, and some such meeting on the lines of a conference would I am sure during the closing stages of the war be an invaluable procedure. This, however, is essentially a matter for the Council. The time will soon be arriving when the door will be closed to membership except through examination, and therefore I hope that all who can reasonably claim acceptance as members will now come in. I would especially welcome an increase in our legal membership. We want more town clerks—I do not, of course, mean to benefit by their advice, but rather for their edification.

It has been a happy circumstance that members of so diverse ability and attainment as this institute is composed of—lawyers, architects, and surveyors—should have, in town planning, discovered that there exists between them that feeling of, shall I say, liberty, unity, and fraternity which under normal circumstances it is somewhat rare to see. I hope and trust it will continue, that we may concentrate on this great work of town planning which none of us can undertake alone.



THE INSTITUTE, GRETNA.—ENTRANCE TO WOMEN'S CLUB AND MAIN ENTRANCE TO ASSEMBLY HALL.

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Monthly Housing and Town Planning Review.

H.M. Factory Settlement at Gretna.

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GRETNA.—STAFF RESTAURANT AND CLUB.

We are glad to be enabled to illustrate in this issue the buildings lately erected in connection with the Government establishment at Gretna. It was necessary in this, as in similar cases, to spread the buildings over a wide area, while the conditions were all so new that it was difficult to make an estimate of the number of men and women who would be employed, and a flexible scheme was a desideratum.

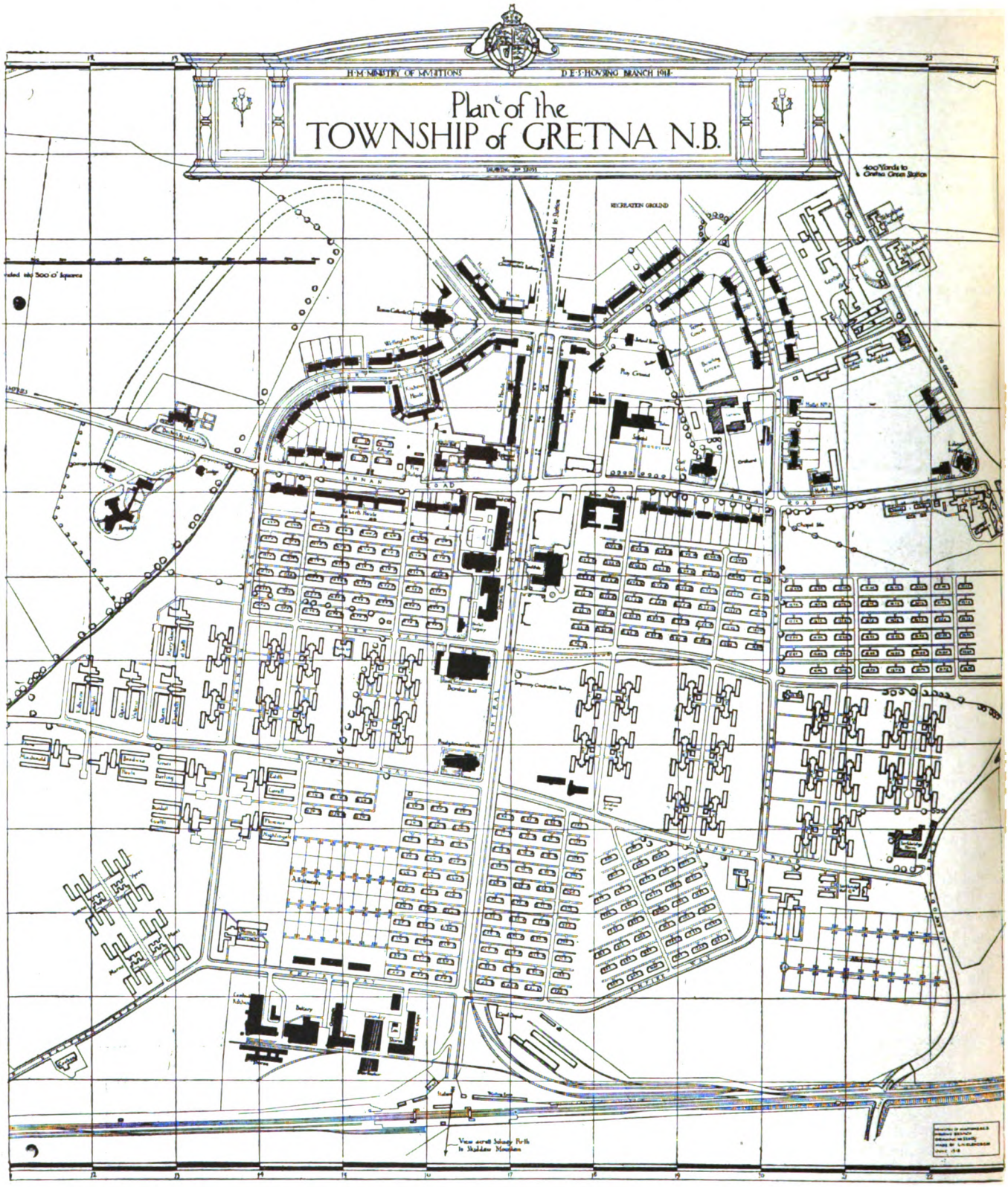
The scheme of housing we illustrate has been worked out under the direction of Mr. Raymond Unwin, under whom have been associated a group of architects well known to their professional colleagues. Mr. S. B. Russell has acted as chief assistant; Mr. C. M. Crickmer as resident architect at Gretna, who also designed some of the buildings; while Mr. Geoffry Lucas, Mr. A. A. Saul and Mr. R. S. Bowers acted as assistant architects, and Mr. H. O. Cave and Mr. Harold Burgess also designed some of the buildings. Subject to general direction the architects employed have been allowed to follow their personal bent, and have been responsible for the design of specific buildings, the object aimed at, and, judging by results attained, being to approximate the conditions as nearly as possible to those which would have been obtained in private practice. The result obtained does great credit to all who have been responsible for it, and Mr. Unwin is to be congratulated on the wise and liberal use he has made of the authority conferred on him. The buildings, as is demonstrated by the examples we publish, are economical, direct and simple, and we much regret that we have not photographs to publish to show how excellent the effect of the general scheme is, but we hope at a later date to be able to give some views.

Many temporary hutments for workers had to be erected before work could be commenced. The township thus served the dual purpose of accommodating,



GRETNA.—SHOPPING CENTRE AND PUBLIC INSTITUTE.

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first, the construction workers to build the factory, and then the operatives who worked there. Something like 20,000 were accommodated on the site or in the neighbouring town of Carlisle and other towns and villages within easy reach by train or bicycle.

The area selected for the main township is immediately south of old Gretna Green village. An advantage of the site was that it could be easily drained by natural gravitation into the Solway Firth, and both a temporary water supply and connection with the permanent water supply to factory could be readily arranged. The site could also be developed without disturbing the old village of Gretna Green, and involved the sacrifice of a minimum number of farms and existing buildings.

The site generally sloped towards the south, and was crossed by a valley running east and west, which formed the natural line of drainage for a large section of the area, and along which a road was therefore laid down. The main access line was planned to cross the existing roads approximately at right angles, the exact alignment being chosen to connect Gretna Green village with its church tower at the northern end, while the southern, if extended, would connect it with the mountain group of Skiddaw, which in clear weather is seen as a termination of the view across the Solway Firth down the Central Avenue. Main roads to Glasgow and Carlisle are connected to the township roads on the eastern side, and pass through Gretna Green village to Glasgow. The point where the Carlisle and Dumfries road crosses the main avenue forms the natural centre of the township. The police station, municipal offices, and episcopal church are situated at this point, while adjacent sites have been reserved for other buildings. Along the Central Avenue adjacent to these are placed the shops and cinema theatre, together with the institute.

It was necessary during construction to lay a temporary railway along the Central Avenue adjacent to this corner, and this has interfered with the use of some of the

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GRETNA.—THE PRESBYTERIAN CHURCH.

sites on the eastern side of the Avenue, but these will become valuable when the railway is removed. The area south of the Annan Road was used for the erection of huts and that north of it for permanent buildings. A square lay-out was adopted for the huts so far as levels would permit; on the remainder of the site the roads have been generally planned to suit the contours of the site.

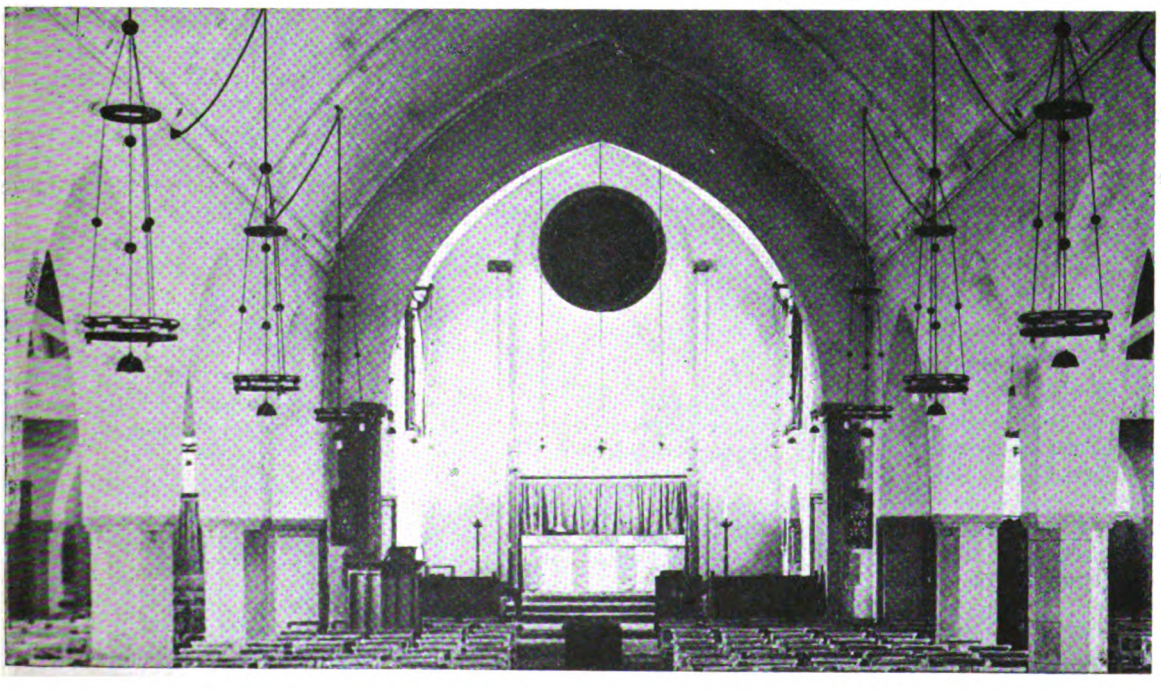
The conditions under which the township was erected made it impossible to call in private firms to carry on many accessory industries, so the laundry, bakery, and central kitchen for the distribution of food to the hostels and mess rooms of the factory had to be erected.

The necessity of obtaining a site for housing at the western extremity of the factory necessitated the erection of a secondary township at Eastriggs, which we hope to illustrate at a later date, and which, like the scheme we have described, includes both permanent buildings and huts. Owing to the shortage of timber, hostels have been constructed in the form of permanent cottage shells to accommodate many of the factory operatives. These when no longer required for their immediate purpose will be converted into family cottages by building up openings in party walls and by carrying out the internal divisions planned and shown in the completed design. This is both an economical and ingenious method of meeting a very difficult problem, and productive of large savings.

We will reserve our description of the Eastriggs scheme until we are able to illustrate it at a later date.

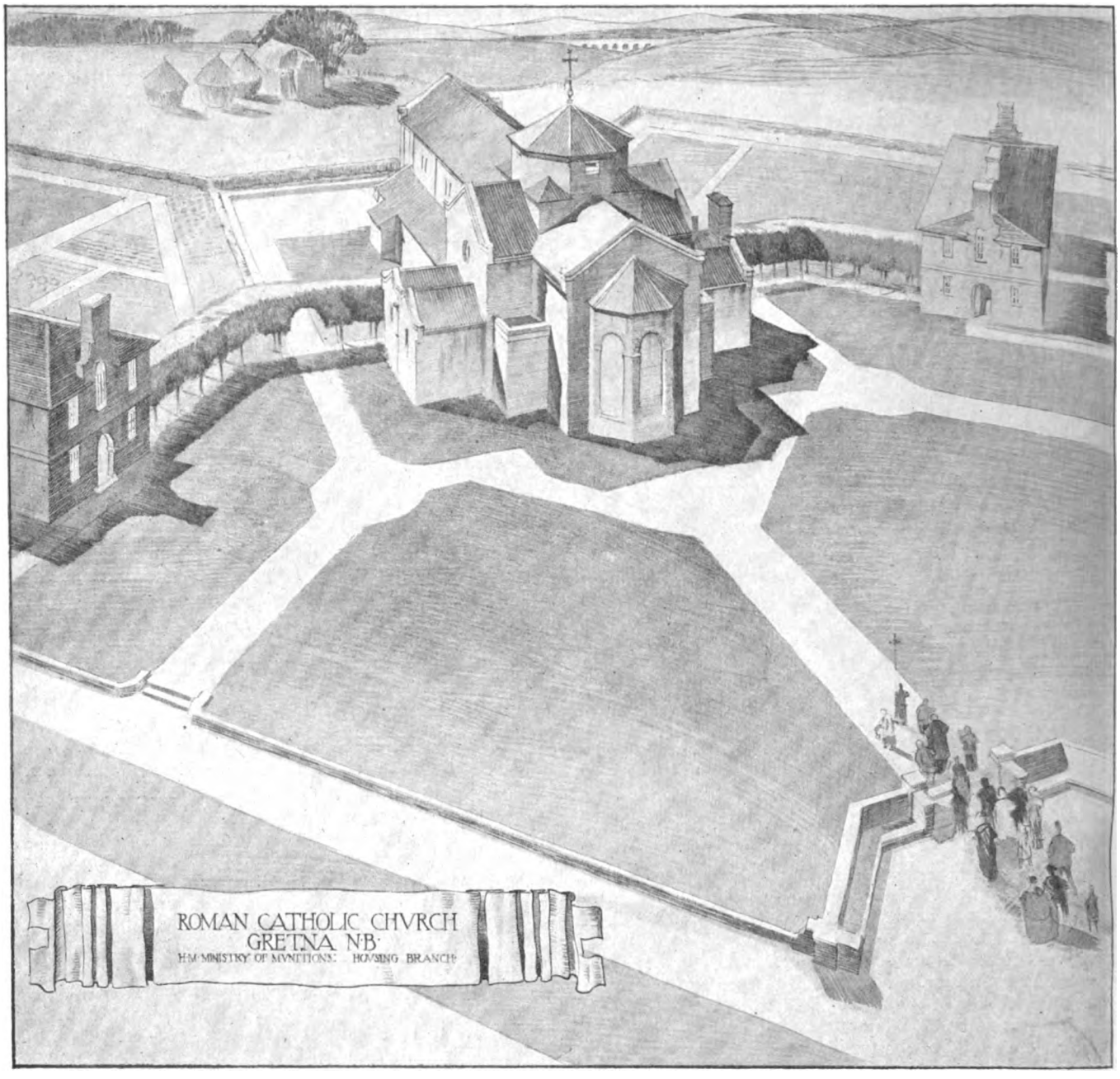
Generally we consider both the Government and Mr. Unwin are to be congratulated on the production of an admirable scheme, in which exceptional requirements have been met in an economical manner.

The erection of the factory occupied many contractors



GRETNA.—INTERIOR OF EPISCOPAL OHURCH.

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working under the general direction of Sir Edward Pearson, on behalf of Messrs. S. Pearson & Sons, who acted as construction managers.

The housing work was mainly undertaken by Messrs. F. Pitcher, Ltd., London; Holloway Bros., London; F. D. Cowieson & Co., Glasgow; P. & W. Anderson, Ltd., Glasgow; J. Laing & Son, Carlisle; Sykes & Son, Ltd., London; Mr. H. Hurst, Letchworth.

The water supply and main drainage were under the supervision of Mr. Kenneth P. Hawksley, of London.

Note.—We omitted in our mention of architects employed in connection with the scheme, Mr. Evelyn Simmons, who has designed an important part of the buildings.

JORDANS VILLAGE.

We give a plan and description of a very pleasing scheme which is to be carried out under the direction of Messrs. Rowntree for a Quaker settlement near Jordans, which, as most of our readers know, is the burial-place of William Penn, and the oldest meeting-house of the community of Friends. A group of Friends and others interested in social reconstruction have recently purchased the Dean Farm Estate, which is immediately opposite Jordans Meeting-house and Old Jordans Hostel. Their object is to create a village on Quaker lines which will provide a fuller opportunity of developing character and self-expression than exists under ordinary conditions.

The estate covers 102 acres of land, and includes a farmhouse with outbuildings, and the beautiful Crutches Wood, consisting of fourteen acres of valuable timber. The south-west corner of the estate is close to Beaconsfield Golf Links Halt on the Great Western and Great Central Joint line. The farmhouse, with six acres of adjoining land, will not, however, be taken over or paid for so long as the present tenant (an old man who has been in occupation for about thirty years) farms some adjoining land belonging to the vendor.

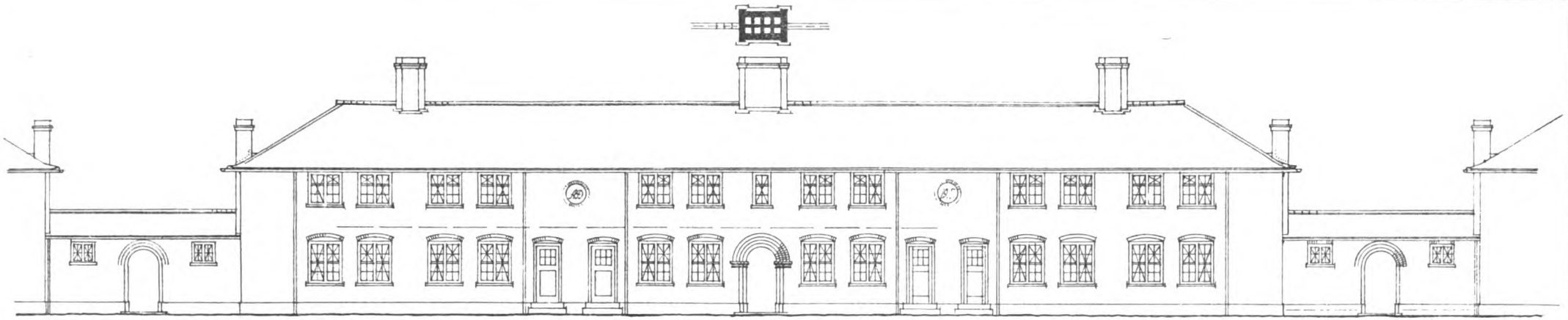
The general lay-out of the estate has been carefully considered and approved. The central idea of the plan is a village with groups of cottages, workshops, and other buildings necessary for the amenities of village life, where suitable industries may be established on sound and just lines, and where the cottage residences will have sufficient land to afford facilities for market gardening, fruit growing, the keeping of poultry and bees, and for other rural occupations.

It is also intended to devote a portion of the estate to the establishment and maintenance of a centre for training in citizenship, as well as in manual, agricultural and other pursuits.

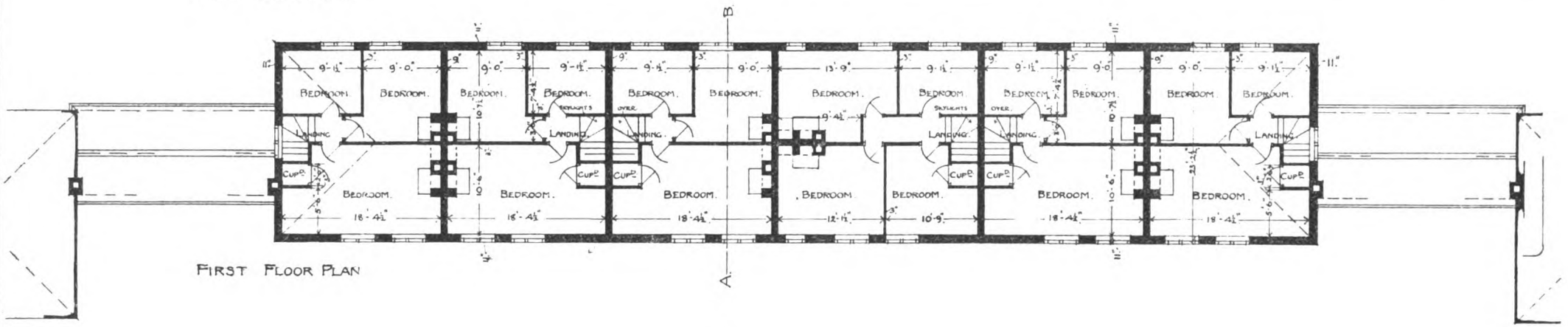
The village industries are regarded as an essential feature of the scheme. Their object will be to provide well made things from the best materials, and to give opportunities to men, women and apprentices to master a craft of their own choice under the most favourable con-

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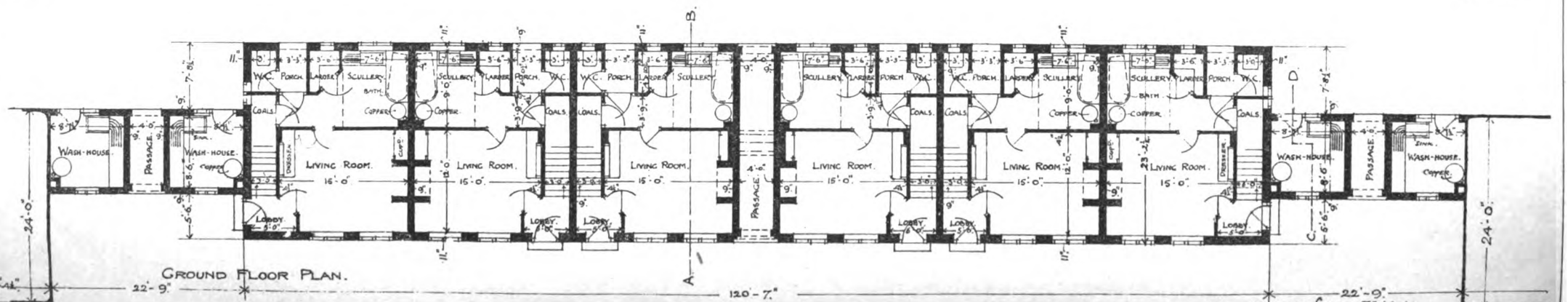
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FRONT ELEVATION.



FIRST FLOOR PLAN



GROUND FLOOR PLAN.

Geoffry Lucas. F.R.I.B.A.
Consultant Architect

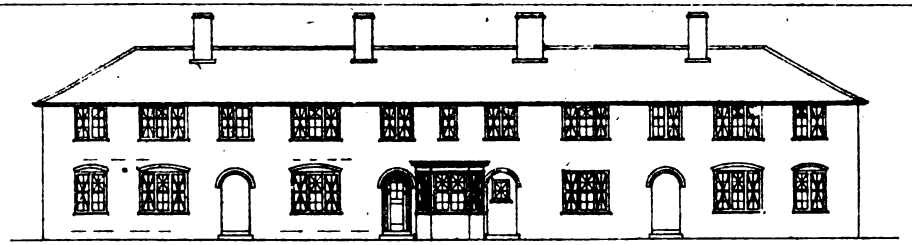
PHOTO-LITHO SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

HOUSES FOR MUNITION WORKERS AT GRETNA.

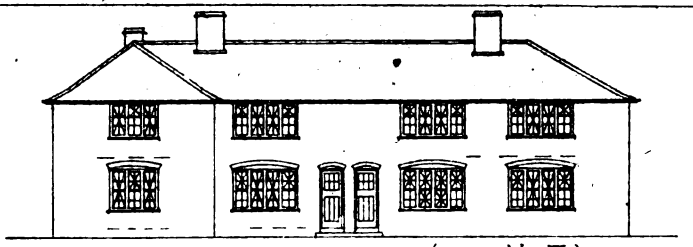
The Architect, Oct. 11th 1918.

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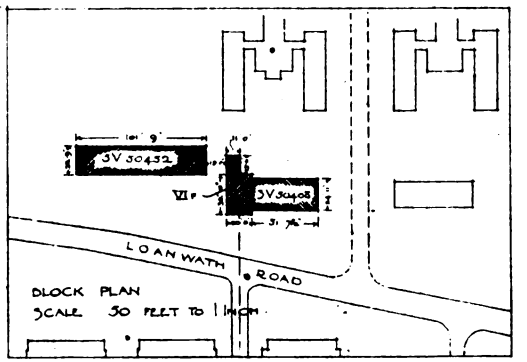
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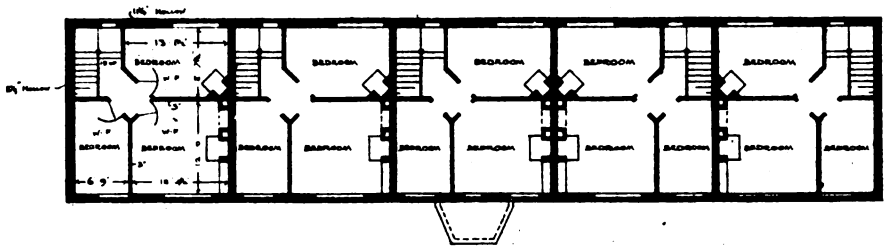


SOUTH ELEVATION (TYPE 5 V)

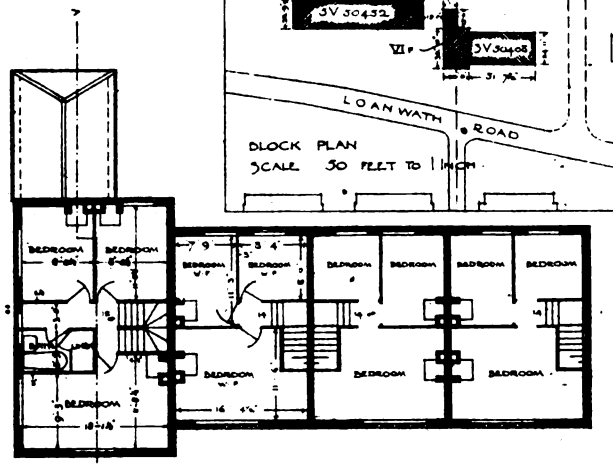


SOUTH ELEVATION (TYPE 5 VA & VIF)

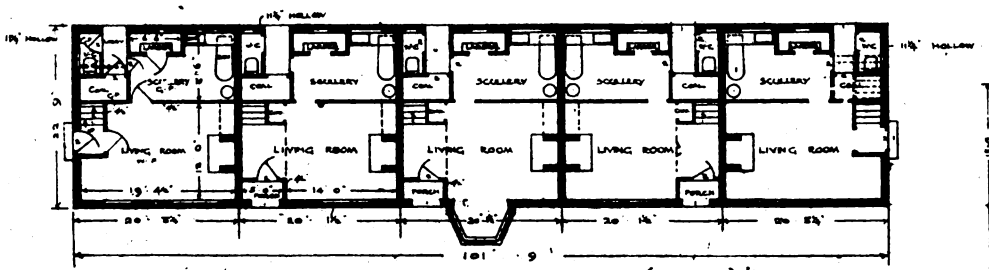




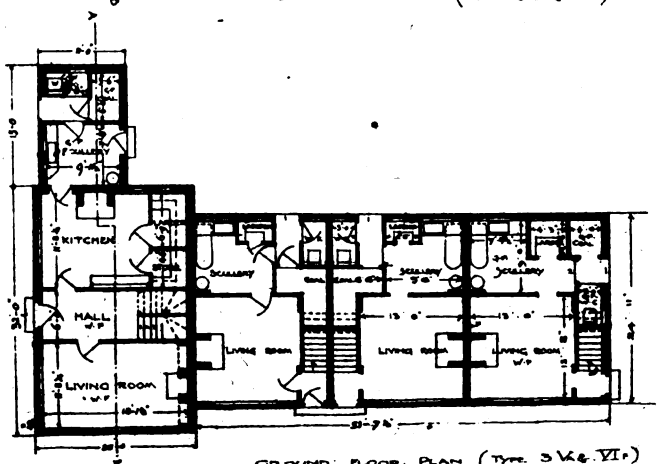
FIRST FLOOR PLAN (TYPE 5 V)



FIRST FLOOR PLAN (TYPE 5 VA & VIF)



GROUND FLOOR PLAN (TYPE 5 V)



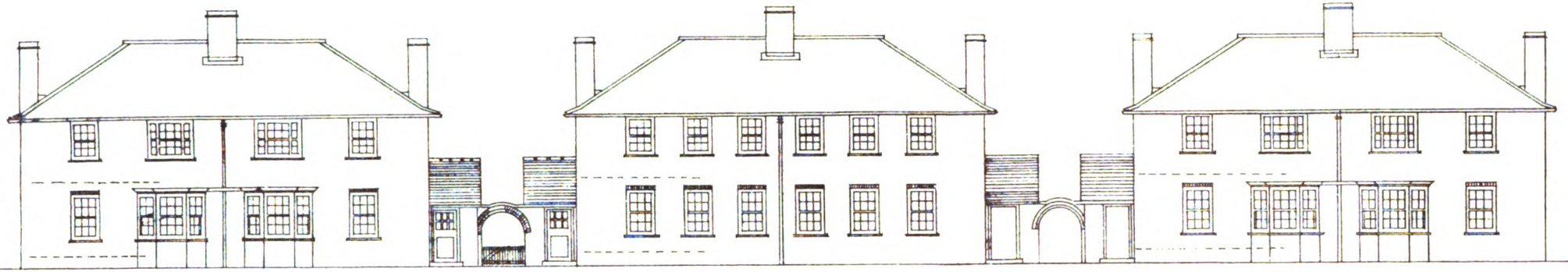
GROUND FLOOR PLAN (TYPE 5 VA & VIF)

TWO BLOCKS OF COTTAGES
LOANWATH ROAD GRETNA.
PLANS, ELEVATIONS & SECTION

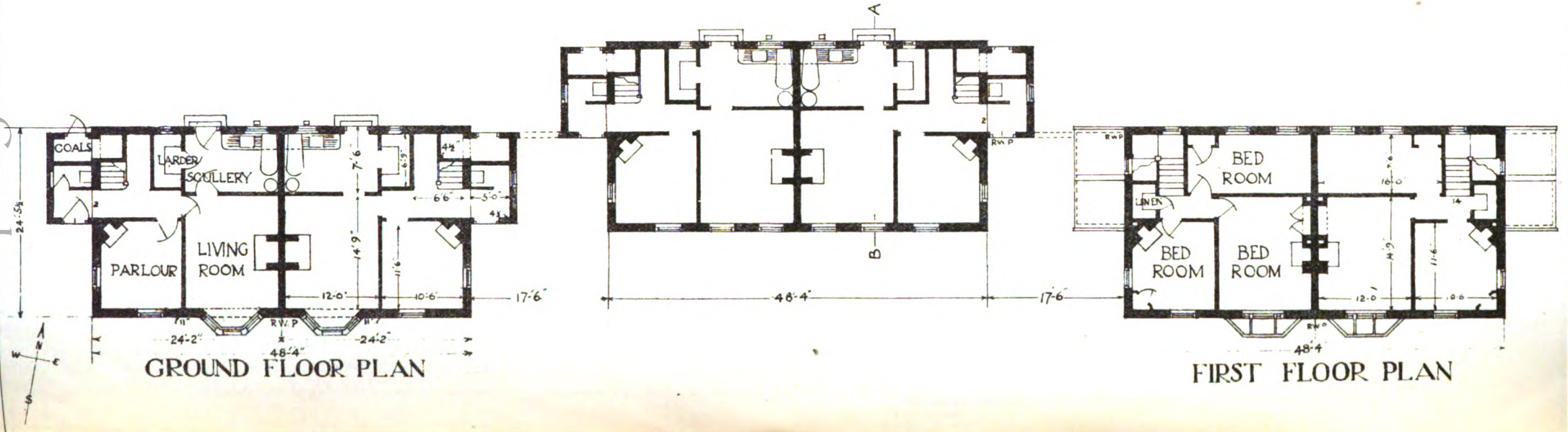
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FRONT ELEVATION



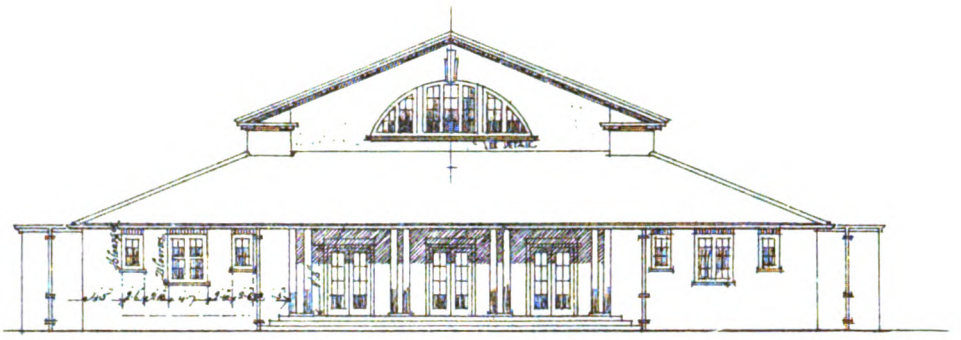
GROUND FLOOR PLAN

FIRST FLOOR PLAN

HOUSES FOR MUNITION WORKERS AT GRETNA.

PHOTO LITHO. SPRAGUE & CO. 69 & 70 DEAN STREET, SOHO, W.

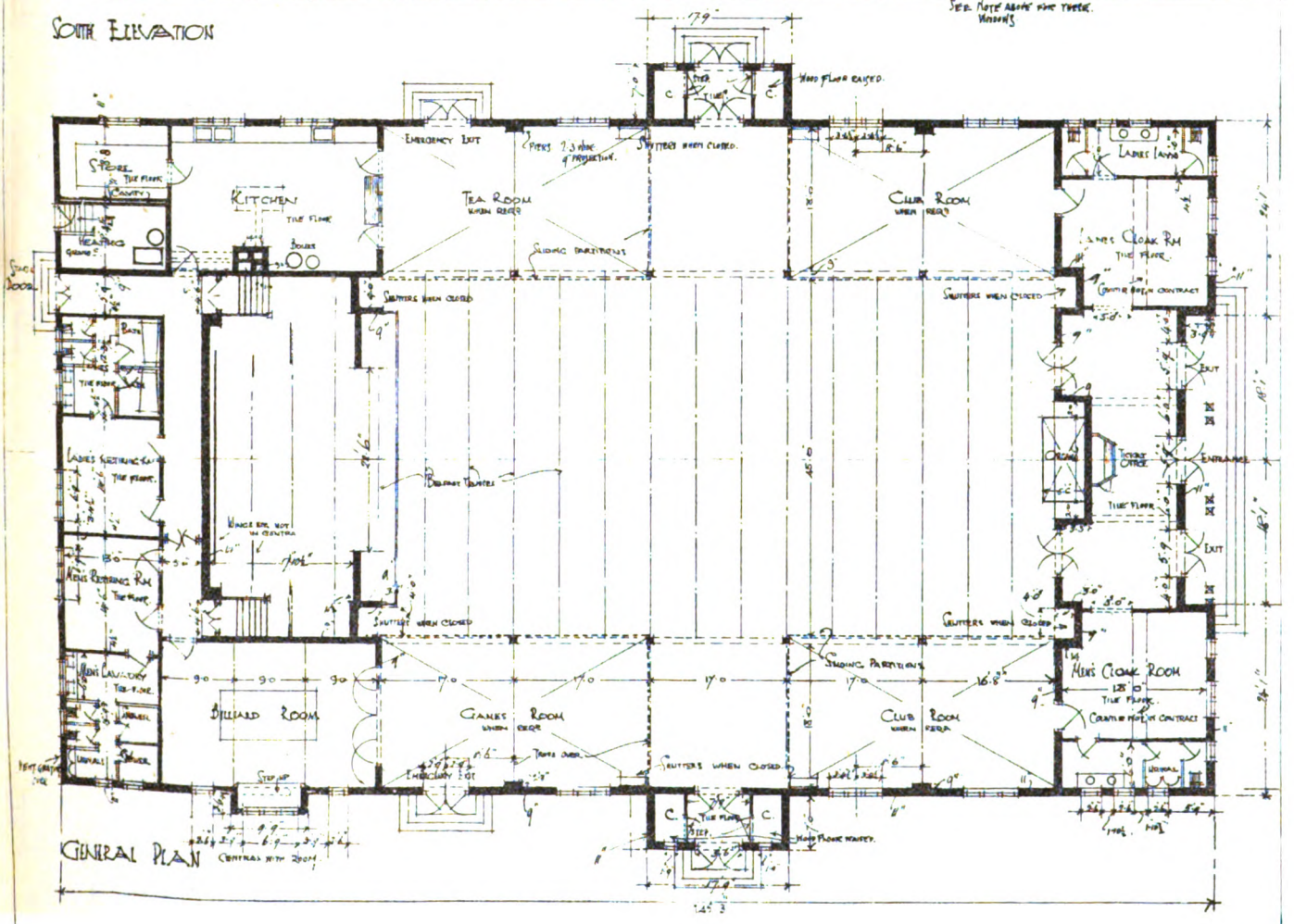
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EAST ELEVATION



SOUTH ELEVATION



GENERAL PLAN

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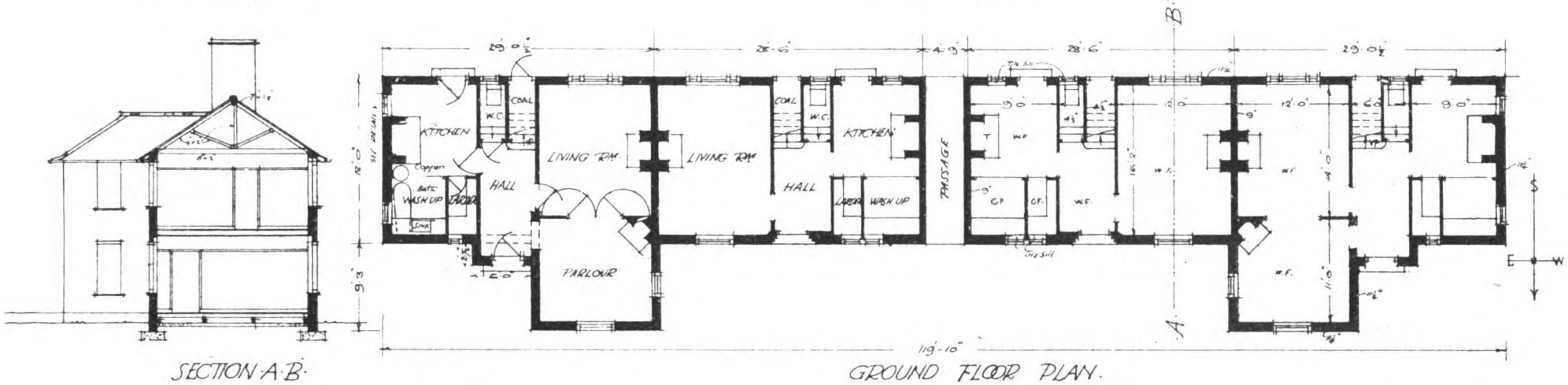
PUBLIC HALL AT GRETNA.

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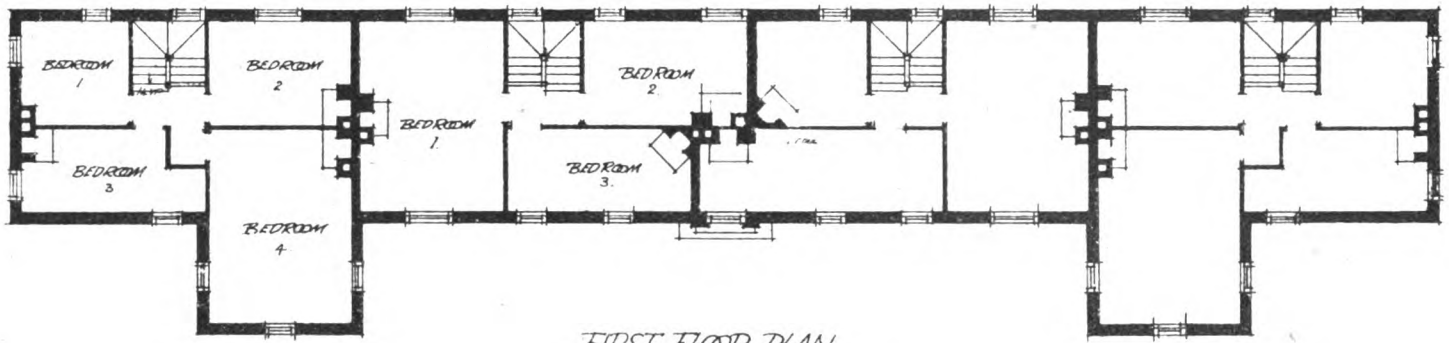
END ELEVATION

FRONT ELEVATION



SECTION A·B·

GROUND FLOOR PLAN.



FIRST FLOOR PLAN.

HOUSES FOR MUNITION WORKERS AT GRETNA.

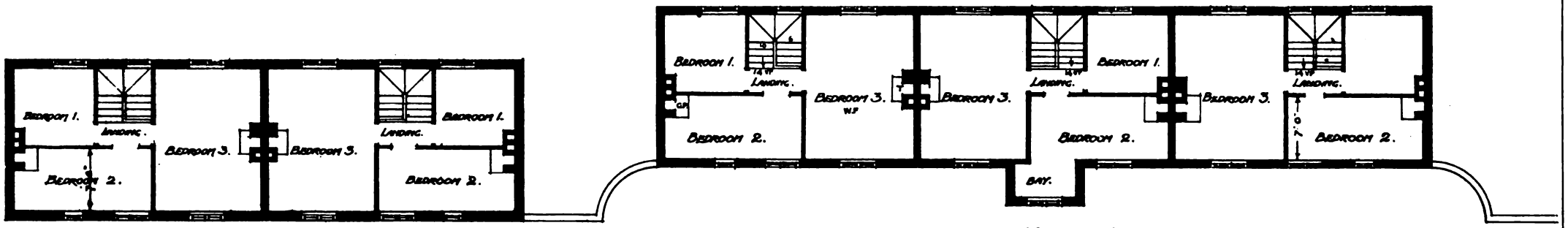
The Architect, Oct. 11th 1918.

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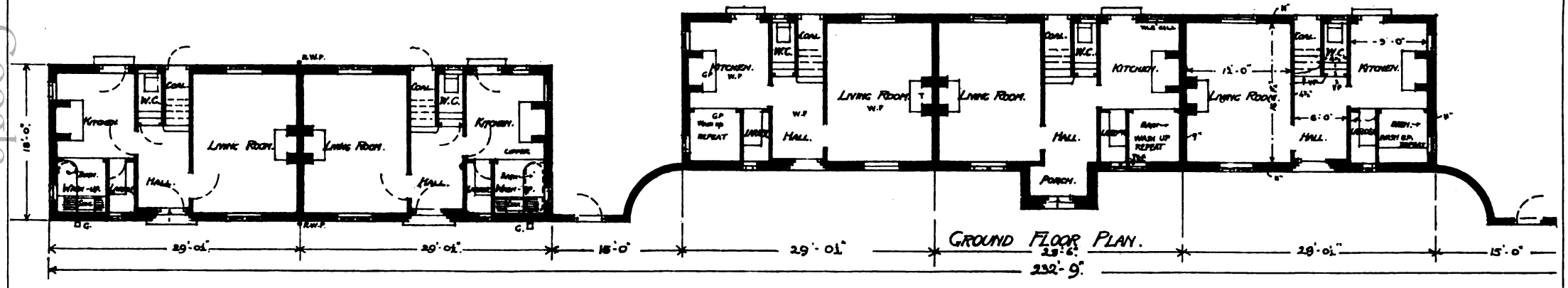
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FRONT ELEVATION.



FIRST FLOOR PLAN.



GROUND FLOOR PLAN.

PHOTO LITHO SPRAGUE & CO LTD 69 & 70 DEAN STREET SOHO, W

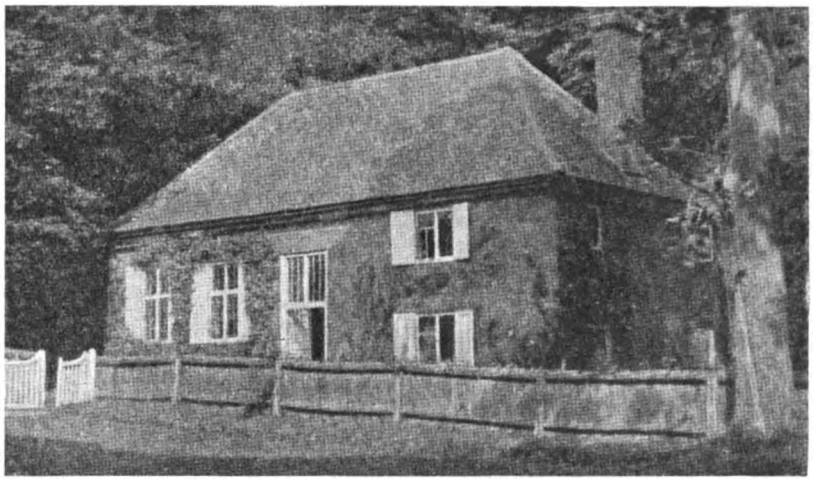
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JORDANS HOSTEL.



JORDANS MEETING HOUSE.

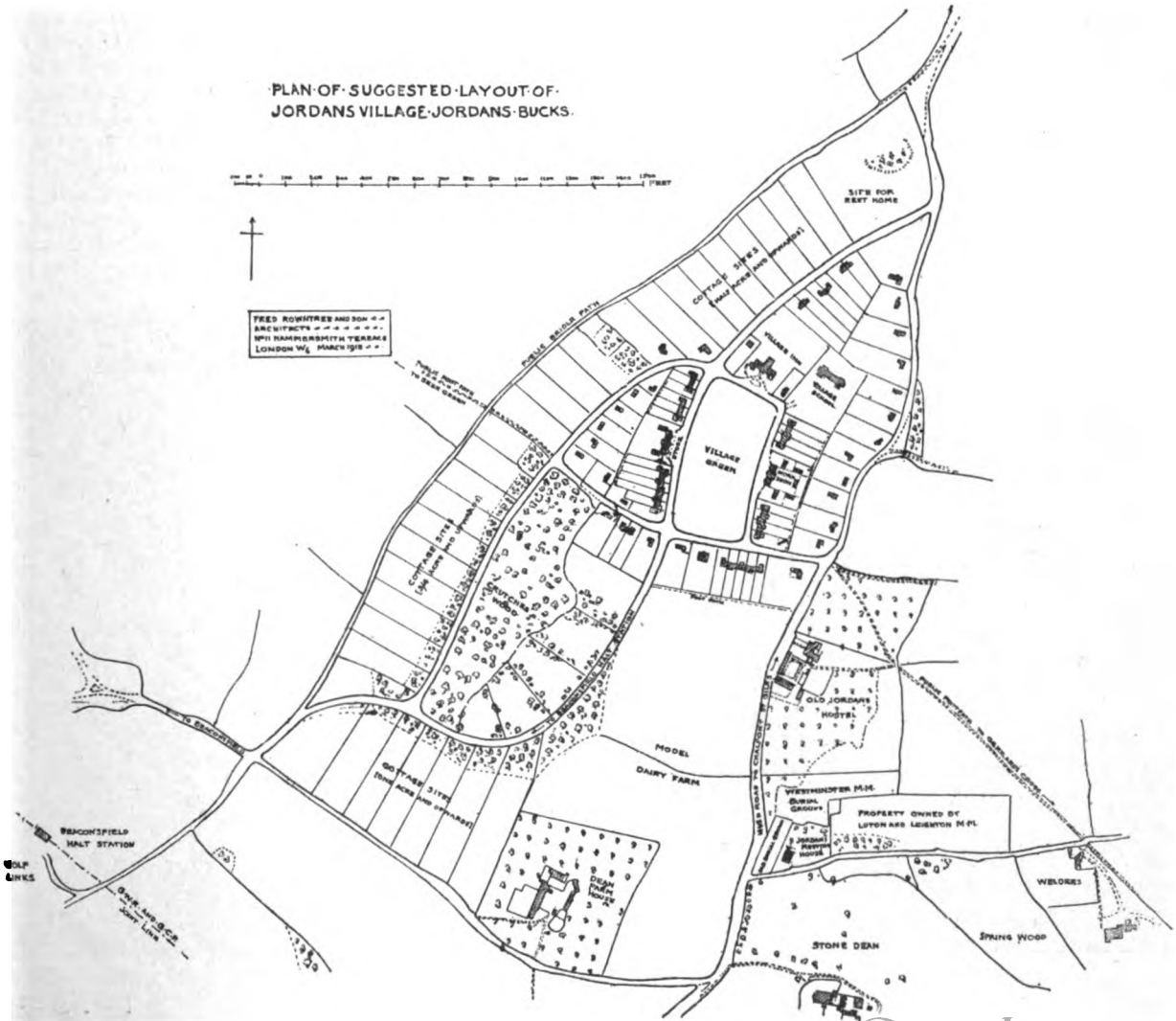
ditions. They should aim primarily at supplying the needs of the family, the village, and the surrounding neighbourhood.

The first stage when building can be begun will be to provide homes for the people who are to live there. The building industry in its various branches should therefore be the first to be established. When the building of the village is completed these industries are likely to remain in varying degrees. The woodwork industry, including carpentry, furniture making, chair making, toy making and wheelwright's work, the making of garden implements, poultry houses, beehives, &c., should develop into permanent local industries. The smith's shop would always be essential, and one or two bricklayers, plumbers and painters would also be able to continue to develop their craft.

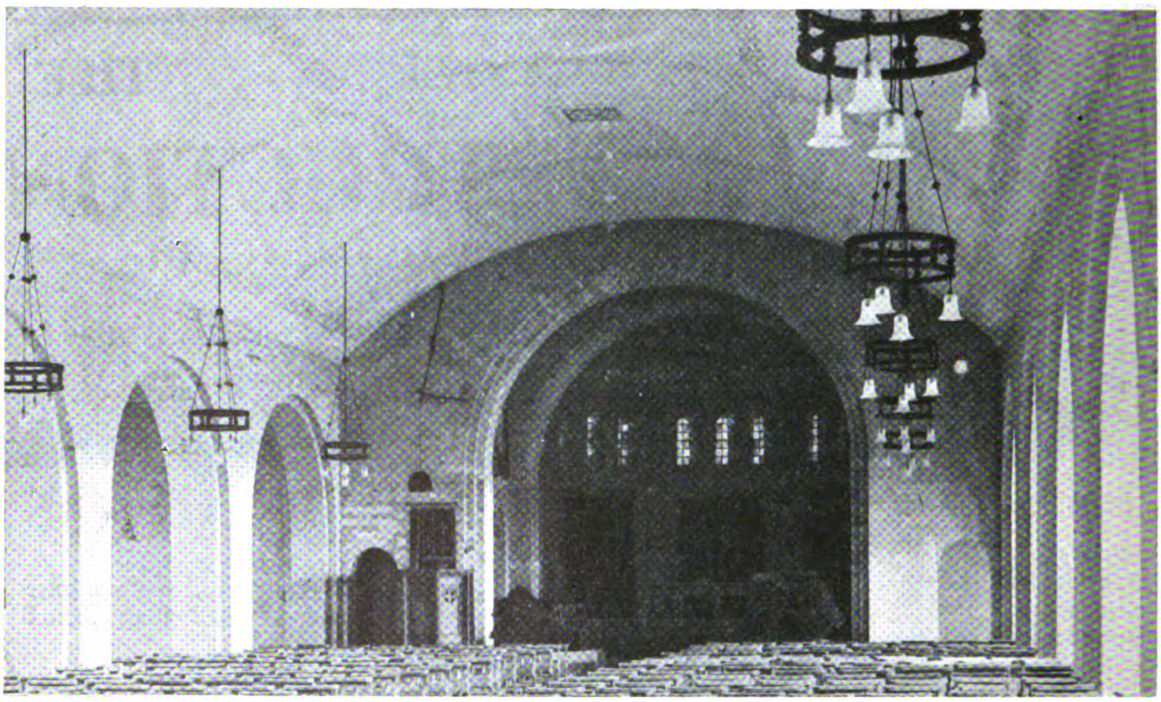
The homes of the villagers, with their plots of land of varying sizes, will provide facilities in the direction of market gardening, &c. The work involved would occupy chiefly the tenants themselves, but a master gardener would also find scope for a small nursery, and his trained assistants and apprentices would be available for tenants requiring help.

Boot-making, hand-loom weaving, and other industries connected with clothing, would also no doubt find a place. A village store, run on co-operative lines, would provide everyday commodities not made in the village. It should also be the receiving and distributing centre for such produce as tenants on the estate may have for disposal. It should have suitable accommodation for jam-making and the bottling of fruit.

A careful investigation has been made of the financial aspect of the scheme, from which it appears that when the whole estate is fully developed on the lines suggested the income will be sufficient to meet all outgoings, including expenses of management and interest on capital, at a



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GRETNA.—INTERIOR OF PRESBYTERIAN CHURCH. [See page 201

limited rate, but it is obvious that during the earlier stages of development it will be necessary to make special provision for interest and other charges.

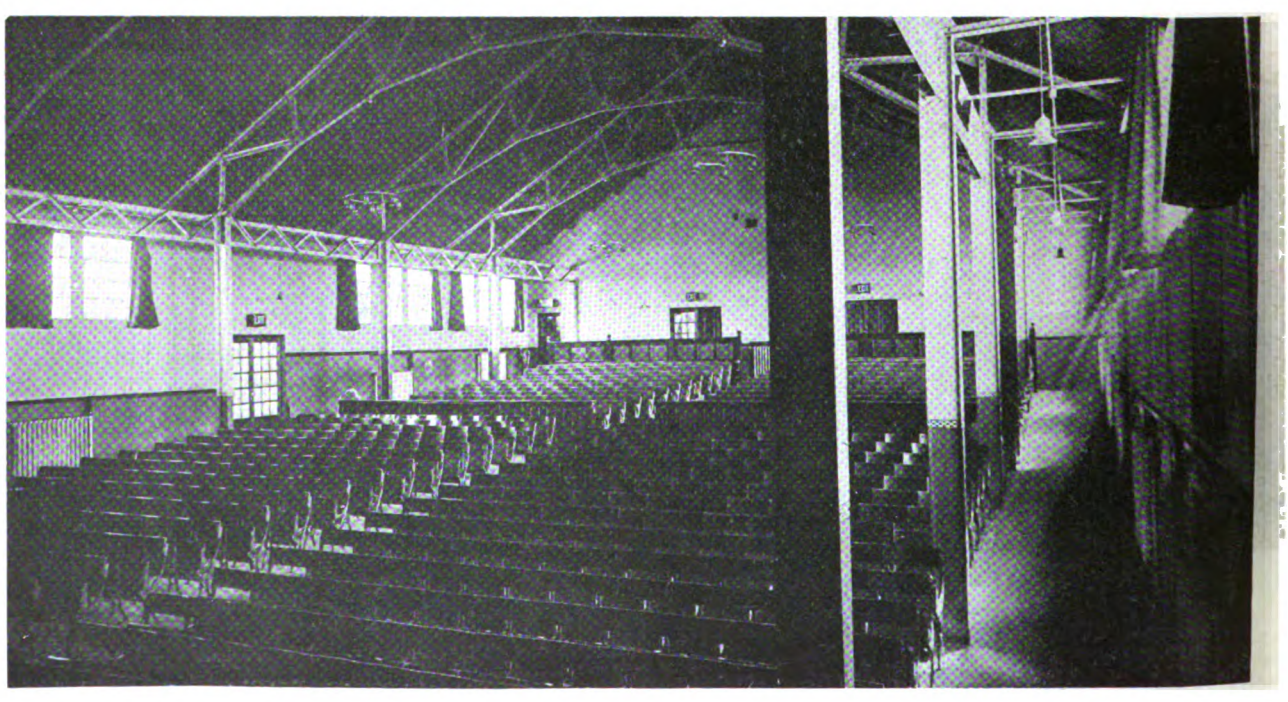
It is an essential part of the scheme that the buildings as well as the land shall remain the property of the company which it is proposed to form. This involves the raising of a larger amount of capital than if the houses were built at the cost of the tenants, but it has advantages which in the opinion of the committee far outweigh this consideration.

The capital eventually required is estimated to be about £100,000. The classification of the capital has not yet been finally determined, but loans and ordinary shares will form the larger part. The shares are hardly likely to receive any interest during the first few years. Sufficient capital has already been provided, chiefly by way of loan, to complete the purchase, but further sums will be required as development proceeds.

The committee believe that there is a wide circle of Friends and others who would wish to give their practical and sympathetic support to this social and industrial experiment in the neighbourhood of Jordans, where development can almost immediately take place. The preservation and extension of an ancient Quaker centre, which has again become well known amongst Friends and is now within easy access of London, should be a gain to the whole Society of Friends. The co-operation and support of those who are not members of the Society, but who are in harmony with the ideals of the promoters, will be warmly welcomed.

Those who can help by providing some of the capital are asked to indicate to what extent, if any, they are willing to forego receiving interest on the whole or any portion of their contribution pending the development of the property.

The plots vary in size from one-eighth of an acre round the village green up to one acre in other parts of the estate. The rent of the land varies from about £15 to £18 per acre, and the rent of the houses will be calculated on the basis of a fair percentage on the actual cost. The rent of the land must be added to the rent of the house. Prospective tenants are expected to sub-



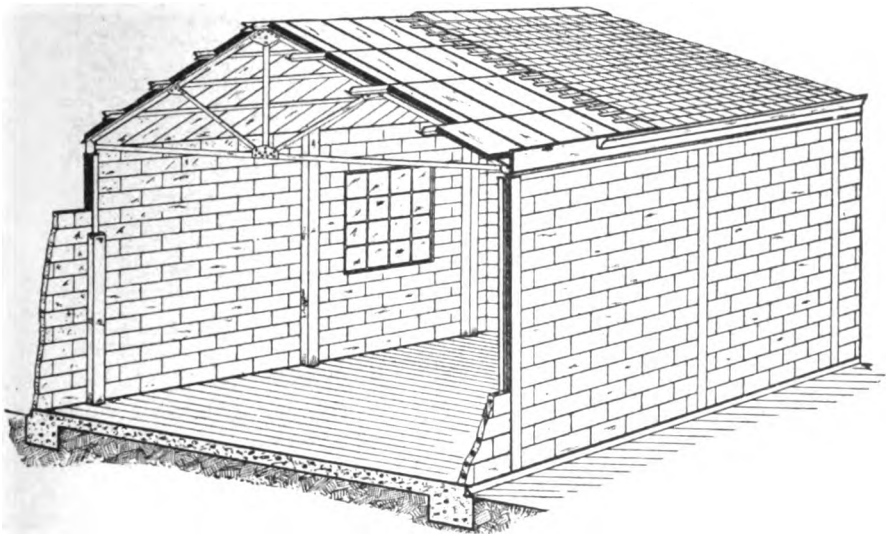
GRETNA.—INTERIOR OF CINEMA HALL. [See page 201

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Brugge-Zeehaven

A RETROSPECT AND A FORECAST.

The History of Zeebrugge in brief, from the Origin of the Movement for its Creation.

By JOHN A. RANDOLPH,

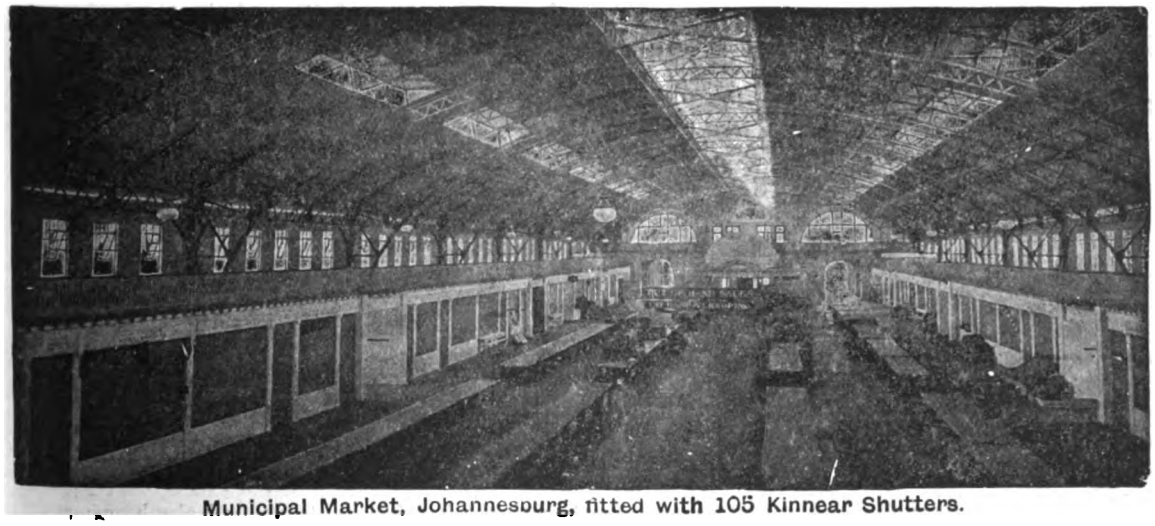
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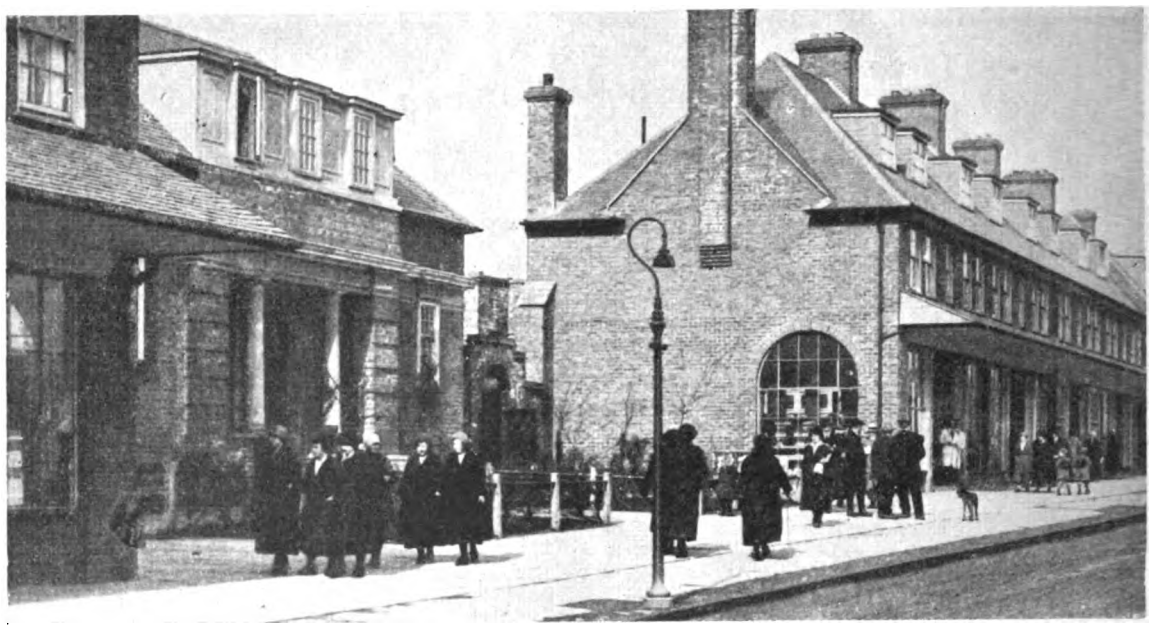
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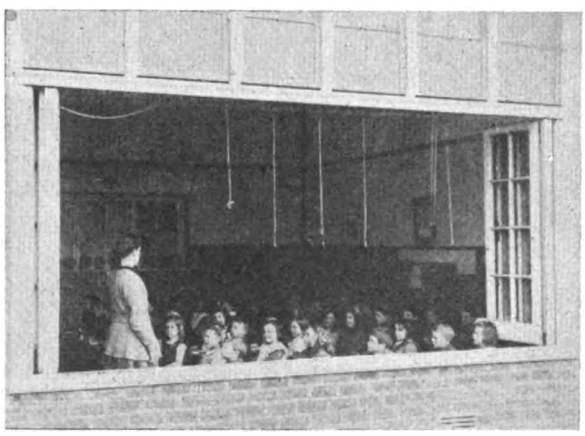


GRETNA.—SHOPPING CENTRE. [See p. 201.

scribe capital equal to at least one-third of the value of the house required.

It will not be possible to begin building the houses until after the war, but the committee are prepared to consider applications for plots from those who are ready to provide some capital and who wish to cultivate their plots prior to the commencement of building operations. Messrs. Fred Rowntree & Son, 11 Hammersmith Terrace, London, W. 6, have been appointed architects and surveyors to the committee, and will be glad to answer enquiries as to plots and houses. All other communications should be addressed to the secretary.

The committee consists of the following:—A. Kemp Brown, Philip Burtt, Albert P. I. Cotterell, Wm. C. Cruickshank, Warwick H. Draper, Edith M. Ellis, Marion E. Ellis, Stephen R. Gloyne, Edward Grubb, T. Edmund Harvey, J. Edward Hodgkin, Anna L. Littleboy, T. Alwyn Lloyd, Alfred Lynn, Jonathan Lynn, John Henry Quinn, Alfred Rawlings, Frederic Rowntree, Malcolm Sparkes, Alathea Yeoman, Henry Harris, secretary, 87 Grosvenor Road, S.W. 1.



GRETNA.—A CLASSROOM IN SCHOOL SHOWING OPEN AIR PROVISION FOR FINE WEATHER. [See p. 201.

CORRESPONDENCE.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Air Raid Casualties.

To the Editor of The Architect.

Sir,—The Committee on War Damage are about to present to the Government returns of casualties which have resulted from the enemy raids by aircraft and bombardment. The returns are from areas having a population of more than 1¼ millions. We shall be obliged if you will publish this letter, so that town clerks and clerks of urban and rural areas which have been attacked and from which returns have not been received may know that the returns should be sent to our Honorary Secretary, Mr. W. H. Southon, 40 Chancery Lane, London, W.C. 2. The particulars included in the returns are—1, date of each attack; 2, number killed; 3, number wounded; 4, estimated cost of making good damage to property. Information is also desired of cases where there were attacks and no material damage done.

—Yours, &c., Mark H. Judge, Chairman.

7 Pall Mall, S.W. 1: October 8, 1918.

GENERAL.

The Red Cross hospital at Lodden, Norfolk, was destroyed by fire on Thursday, October 3.

The borough engineer of Batley has been instructed to prepare plans for 300 houses for the working classes to be erected after the war.

In succession to Councillor Chown, the present Mayor of Northampton, Councillor Martin has been elected. Both Councillors are builders.

The Blyth Urban District Council have approved a scheme for building a national kitchen and restaurant on land in Bridge Street at an estimated cost of £2,300.

Resuming the season's work with a very attractive list of lectures, the Literary and Philosophical Society of Liverpool, one of the oldest of the learned societies in the city—it was founded in March 1812—is fortunate in having secured the services of so eminent a scientist as Sir Oliver Lodge to give an address. He will deal with the subject of "The Ether of Space," at the meeting on Monday, 28th inst., at the Royal Institution. Sir Oliver Lodge is well known in Liverpool, having been some years ago on the professional staff of the University.

The second lecture of the series arranged by the Industrial Reconstruction Council will be held in the Saddlers' Hall, Cheapside, E.C. 2, on Wednesday, October 16. The chair will be taken at 4.30 by the Right Hon. the Lord Mayor of London, and an address on "Principles of Reconstruction" will be given by the Right Hon. Christopher Addison, M.D., M.P., Minister of Reconstruction. Applications for tickets should be made well in advance to the Secretary, I.R.C., 2 and 4 Tudor Street, E.C. 4.

At a meeting held at King's College, London, in support of a war memorial, it was decided by a large majority to acquire a recreation ground. The Hon. R. C. Parsons, who presided, said that it had been agreed that, in the first place, a tablet should be placed in the chapel bearing the names of those who had fallen. There had also been a suggestion that a new chapel should be built, but as there was a movement to remove the college from its present site that was not possible. The Principal, Dr. R. M. Burrows, wished they could have built another hostel, but as that was not practicable he supported the idea of a recreation ground. A committee was appointed to raise the required funds.

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THE ARCHITECT
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Reconstruction should Involve the Elimination of Waste.

We believe the present proposals of the departments of the Government with regard to housing are based on fundamentally wrong principles, and will involve a huge loss of the public funds without any adequate return at a time when we shall require all our energies and capital to meet the difficulties and problems which lie before us. Whether the cost of the housing schemes advocated by Government departments are met out of the proceeds of Imperial taxation, or out of local rates, they will have equally to be borne by the nation, primarily by a limited number of taxpayers who already bear the bulk of the direct financial burden of taxation, but incidentally by the workers whose wages are affected by the financial claims on industry which must be met by their employers. The question is in reality one affecting all of us, for all money which is not usefully employed for an adequate return is a loss to every member of the community. Moreover, the proposals we allude to have never been submitted to the electorate or approved by them. If and when they are, and the electorate understand that they will have to pay for municipal schemes which might be replaced by other means they will probably disappoint the enthusiasts by adopting the time honoured maxim of *festina lente*.

If agriculture is to be revived and extended as we all hope and once more to be a flourishing industry, farmers may well be asked to house their labourers, obtaining any financial assistance required in the form of loans from the Government or other sources, and repaying such loans in the customary way. Our manufacturers could in many cases act in a similar manner, while organised labour is quite able out of the wages now paid and likely to be paid to provide the accommodation it needs on terms that will enable the builder as in the past to carry out housing on commercial terms. The assertion that the increased cost of building makes it impossible to ask for an economic rent is a fiction of the imagination, and at the most all Government should do to stimulate immediate building is to grant a sum equal to the difference in the estimated cost of building immediately after the war and the future normal level which will be reached after conditions become stabilised. This and the granting of loans for building on commercial terms should meet present requirements. If the cost of building does not fall within a certain term of years to the level assumed, the loans to meet the special difference should be correspondingly increased on commercial terms. The Finance Act 1909-10 should and must be repealed and the laws of rating amended. The function of municipalities in relation to housing should be chiefly advisory and administrative. They should lay down town planning schemes, set a standard of requirements and sometimes to a limited extent act, as the London County Council have done, by laying out model estates, the finance of which is arranged on sound commercial lines. Such estates would form demonstrations in practice which private speculators would follow in work in their immediate proximity. This in conjunction with the clearance of insanitary areas appears to us to be the true function of the municipality in housing. But we cannot too strongly insist that the location and amount of housing which is required after the war, the effect of emigration and like factors cannot be ascertained till the lapse of some years, and with all our wish to bring about better conditions we ought to wait until the nature and extent of the problem can be ascertained, as is not the case at present. No wise surgeon will operate until he has clear evidence of the exact location of a disease, but our authorities are inclined to push on their schemes before they have evidence which is susceptible of scientific proof.

In addition we are quite likely to be on the eve of developments which would have a dual effect on the housing required in the near future, affecting both its nature and its distribution which need to be most carefully considered.

We give elsewhere a reproduction of a map of the North of Italy which shows the distribution of electrical power there, and we know that it is contemplated that the whole of England is to be divided up into sections in each of which a great central electricity supply plant will be installed. The mains from these stations will supply whole districts with electrical energy which can be used in the form of heat, light or power. This in the first place will affect the location of manufactories and works, and as a corollary the location of the housing of the workers employed in them. It will doubtless be profitable in many cases to erect works in country districts, and the effect of the scheme on building must be at present largely conjectural.

But we know that if this comes to pass the construction and arrangement of our houses will be largely revolutionised by the adoption of heating and cooking by electricity, by the elimination of chimneys and coal cellars, and the simplification of service. It is not likely that women who have been employed in war work will be satisfied to use antiquated methods involving additional labour when newer and better ones have become possible. In addition we shall in many cases utilise communal systems for the supply of hot water, nor can anyone say to what extent the municipal kitchen may not be adopted in many districts for economy of labour and material.

Now all the designs obtained in the recent R.I.B.A. competition and the designs asked for in the Scottish Housing Competition are founded on past methods, and buildings based on them may be out of date within a few years of their completion, a convincing argument to those who are not governed by prejudices that we should think before acting. But while holding strong and definite views we shall always welcome those of others and give them due prominence and fair consideration, and would therefore welcome correspondence on the subject from all our readers, as one of our chief objects is to promote full and open discussion of all questions of interest which concern the crafts of building.

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Illustrations.

CLOCK CASES (see Review).
THE COURT HOUSE, BROADWAY.
WYNN'S PARC, DENBIGH.
JERVAUX ABBEY, YORKSHIRE.

Notes and Comments.

Electrical Energy in Relation to Reconstruction.

We give a map of Northern Italy giving the centres and trunk lines of Electrical Power Systems published in "Annali di Ingegneria e Architettura," as we think the reflections it suggests have a very pertinent bearing on the problem of reconstruction and the provision of housing in this country. If, as we are informed, it is proposed to generate electrical energy in bulk after the war and distribute it in mains all over the country, we may be in measurable distance of a change which will radically affect the location and future of our industries, and consequently the position of our towns and villages of the future. If we imagine the whole of England traversed by a close spider web of great mains similar to those shown in the Italian map, many of our industries will find it advantageous to put up works away from existing centres of population, as they will lessen their establishment expenses by escaping heavy rates and obtain greater room for their works. In addition, cheap electrical energy will enable smaller businesses to be carried on more profitably than is the case now, as expensive steam engines and other appliances will no longer be required. This is a change which will be welcomed by many who deplore the elimination of individuality involved by the enormous commercial undertakings of to-day. As it was put to us, in the smaller works there is more chance of a man's merit being quickly recognised, and it is easier for a man to rise above his fellows by superior ability or diligence. The effect which it will have on the construction and planning of our houses is very obvious, but has apparently been overlooked by the departments who are urging the immediate provision of housing schemes before we have any chance of ascertaining the trend of future developments.

Housing at Sheffield.

The "Sheffield Daily Telegraph," in describing a scheme for founding a model village at Handsworth, says that the representatives of a number of big works went to Earswick for the purpose of studying conditions on the spot. Our contemporary remarks rather cynically "we cannot recollect that capital in Sheffield has ever taken the trouble to consider the question of houses for labour, nor can we call to mind that any of those who have acquired wealth in this city have devoted much or any of it to assisting in the solution of this particular problem." We think our contemporary is somewhat unfair, for Sheffield has had, like other of our towns, a Town Council on which labour as well as capital has been represented. Would it not be truer to say that both have been indifferent to the question in the past as they have in other towns been indifferent to sanitary considerations which affected the welfare of the whole population? A good deal of the poor housing in many towns where industries have been profitable and wages abundant and high has been due in a large measure to the preference to spend money in directions other than those of housing. The average professional man, though he may be ill able to afford it, thinks it necessary to spend a portion of his income in a way which many of the working classes would think absurd. We have heard accounts of the expenditure of the working classes in their outings at Blackpool and other places which, if not amply supported by evidence, would seem incredible. It seems to us time to drop these rather one-sided recriminations and come to a business-like settlement as to what should be done, and how it should be done.

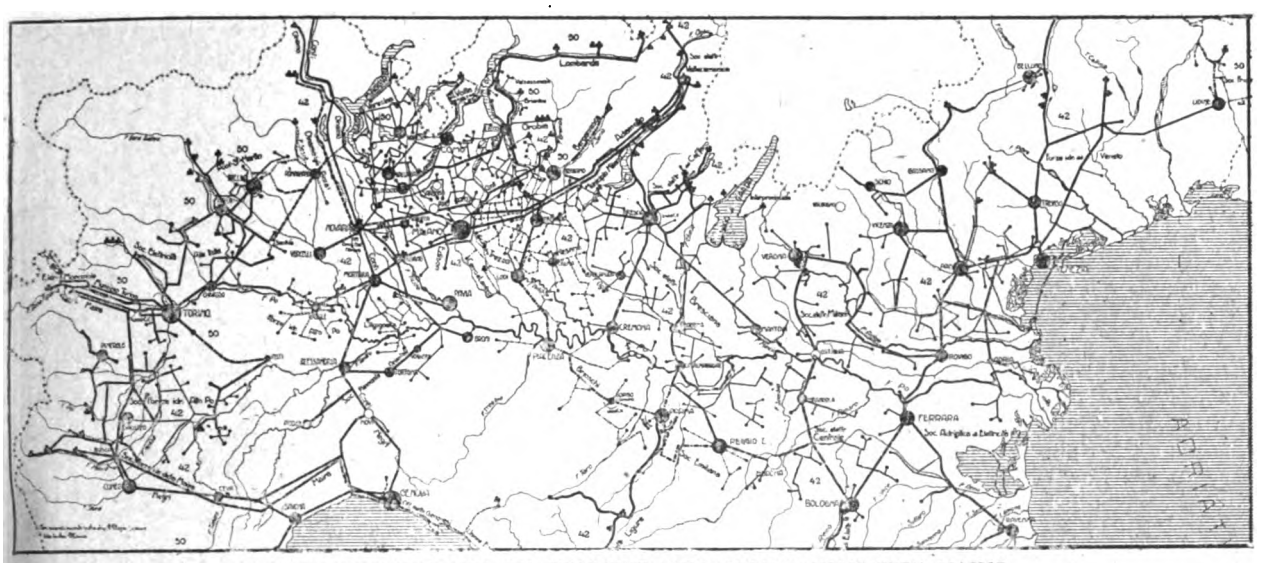
A New Eldorado.

Lord Leverhulme having acquired the island of Lewis is devoting much energy to schemes which will transform it into a flourishing community. The development of the fishing industry, the production of iodine and the utilisation of the products of seaweed are subjects which are receiving consideration. Engineers are being employed to survey possible lines for railways connecting new harbours to be formed with Stornaway, while main roads are to be improved and motor routes made to supplement other means of transit. Ice factories, cold storage and canneries for the curing and treatment of fish are also planned, and works of construction are to be shortly put in hand. In addition to this the peat lands of the island are to be utilised as fuel and for horticultural purposes, and nurseries for the raising of timber trees are to be established. Before the war the population of the great island was only 34,000, but it is estimated that it will ultimately be able to maintain a population of over 200,000. It is interesting to note that a great and beneficial work is undertaken not by one of the free democratic community of the virtues of which we hear so constantly from labour agitators, but by a great capitalist who will probably be able to prove that there is no reason why capital should not earn a fair return and at the same time create prosperity for the mass of the people. Labour will possibly not be wholly satisfied unless it ascertains that Lord Leverhulme has damaged his commercial interests in the process!

The Channel Tunnel.

We have received a great mass of literature on the perennial subject of the Channel Tunnel, but as far as we are concerned we do not need "conversion." There seems to be no substantial reason why the tunnel should not be built, and many why it should be taken in hand immediately after the war. Apart from the differences of language, the war against a common enemy has welded most of the States of Europe into something like unity, while it has convinced the greatest Chauvinists among us that war does not really pay anyone, and at the same time it should have convinced the profoundest pacifist that we cannot wisely leave one's valuables scattered about when there is an armed burglar in the house. The bonds which now bind us to France may be fairly held to be unbreakable since an association in arms against the greatest menace which has ever threatened civilisation has become the greatest of all our national ties. A League of Nations has come into being in fact, and we all hope that international intercourse will be as active and complete after the war as now we are fighting for a common end. We believe the reluctance of the authorities to forego their opposition to the Channel Tunnel is simply a relic of official dignity and red tape, which is likely to be swept away within a short period of the conclusion of hostilities.

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MAP OF NORTHERN ITALY SHOWING THE GREAT ELECTRIC MAINS.

RURAL HOUSING AND VILLAGE PLANNING.—I.*

THE AGRICULTURAL VILLAGE OF THE PAST.

To understand fully the problem of rural housing it is a wise course to make a thorough investigation of rural conditions and of the agricultural village in the past, and this if only because no industry is so conservative as that of agriculture.

The earliest records of village life in England show us a state of society where members, living together in detached groups, were bound together by family ties, an almost universal system amongst communities of primæval people. The village community of the ancient Briton was tribal, and its site was less permanent than that of the later Roman settlement or Saxon village. The tribal system has undoubtedly persisted until quite recently in the Celtic areas of Great Britain.

But the real interest in the origin of the English village and the Danish village of the Eastern counties relates to the influence of the Roman colonisation and later Saxon acceptance of same. During the Roman occupation, apart from purely military "castra," which often developed into cities like Chester, the land was for the most part populated on the "villa" system. A country having been conquered and roads surveyed, selected areas were parcelled out to those Roman freemen who wanted reward for military service.

When the Saxons came over they found England extensively cultivated, also ironworks, quarries, potteries, brick and tile kilns, glass works, &c., more than thirty walled cities, many camps and military stations, and everywhere good roads. Near each town was an area of tilled land, and along the roads stood neat and comfortable houses, each with its farm and retainers. It was a golden land to the Teutonic eye.

The Saxons divided the land, villas and estates going by lot, and these Roman villa buildings, if not destroyed in their raids or left to fall into decay, were taken over with slaves and bondmen, and work was continued as formerly. As to whether the developed Saxon village owes its most pronounced features to the influence of the Roman villa or to the tribal traits of the invaders is a controversial question, but let us now describe in detail the Saxon village of pre-Norman times, a high-water mark in English village history, and one to which may be traced the strongest traditions in the village community of to-day.

The village would be made up of a manor house with its farm, the demesne, probably consisting of about 500 acres. Clustering near by or straggling along an unkempt lane would be the farmhouses of the villains, and closer together in groups would be the cottages of the cottier class. Immediately outside would be the yard lands of the villains, the few acres of the cottiers, the meadows, and the open fields. There might be six or ten villains (these are average numbers), each of whom would hold about thirty acres in arable land. These acres would not be separated, but would consist of separate acre or half-acre strips, scattered all over the arable land, and inherited from father to son. In this area would also be a few strips, sometimes amounting in toto to five acres, held by each cottier. The arable land was cultivated on the three years' system.

Then there was the Lammas land, set aside for hay, which was common after the hay harvest had been gathered on Lammas Day. Away outside would be the woods, wastes, and common land, common to all, but marked off roughly as included in the manor or "tun." Whilst the villains rendered service to the lord, practically the whole time of the cottier would be in service to the villain. Of the cottier class were the ploughmen, shepherds, goatherds, &c.

Village disputes were settled in the moot hall, or hall of the manor, or in earlier times under the village tree. Then we must not omit to mention the cow common and poultry run, the elementary village green. The priest was an educated freeman and a dependent of the lord of the manor, who owned his church.

One can see how full of interest was village life in these Saxon times. Each villager inherited his position, had his own garden and agricultural strip and free access to the open land, where he could gather wood, fish, or, with restrictions, hunt. He had his holy days and days when the whole of the village proceeded to the market town and fair.

By the twelfth and thirteenth century the influence of the Church had grown, and the priest, originally entirely dependent on the lord of the manor, assumed a more influential position, and my lord became very often an absentee. England became more closely organised, taxation was established, the manor became a royal holding, and the village dispute was taken to the hundred moot. The market, moreover, became subject to strict supervision and the extraction of tolls. Towns grew in number and importance, and whilst the handicrafts of the village were supplanted by the trade crafts of the town, towns became more and more dependent upon the villages for their food.

This great change in the condition of the agricultural classes was suddenly augmented in the year 1349 by the depredations of the black plague, and whilst in some cases it swept away the populations of whole villages, it left others all over the country wrecked and depleted, and it is interesting at the present day to note that the shortage of labour which followed produced a rapid rise in wages, which was quickly answered by the passing of the Statute of Labourers, an Act creating a minimum wage, and resulting at the end of the fourteenth century

* By Professor Adshead, F.R.I.B.A., Chadwick lecture delivered at Derby on October 7.

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in a great peasant revolt. It was under these conditions that arable land was turned over to sheep farming, and that there was introduced into the village industries such as the manufacture of cloth.

During the fifteenth century enclosure began and became serious, due largely to the interest of town folk in land. Now we get the first appearance of convertible farming, whereby the farmer, instead of holding a multitudinous number of strips, had his holding consolidated into six fields, and one can easily see how the holding of the poor cottier becoming more and more precarious in many cases disappeared, leaving him a landless labourer on the land.

From then onwards the village as a social community shows a loss of intimacy and partnership between the lord of the manor and his tenantry, he at the same time strengthening his purely legal hold on the land, and it is easy to see how dissensions that set in amongst the labouring classes led, on the one hand, to food riots and emigration to the towns, and, on the other hand, to a bolstering up of the paternal interest of the squire by such acts of benevolence as the founding of almshouses, and the institution by Act of Parliament of many forms of relief of a charitable kind.

Up to the fifteenth century charity had been dispensed by the Church, but, by the Act of 1601, "the old Poor-Law of Queen Elizabeth," each parish became responsible for its poor. Needless to say, the poor-rate that followed was accompanied by an increase in paupers, tramps and sturdy beggars being classed with the deserving poor.

During the seventeenth century the pack-horse was superseded by the waggon and ways became roads, but it was not till the middle of the eighteenth century that we got the coach.

It was the coming of the coach that gave importance to the inn. In the Middle Ages there was always a distinction between an inn which lodges and entertains travellers and a common ale-house. The ale-houses and inns were run by local brewers in circuits, and it was in the year 1550 that approved ale-houses had to licence annually. It was in the middle of the seventeenth century that, with the Act of Nonconformity, Quakers, Independents, and Baptists vied with one another in upsetting the authority of the priest, and in establishing their respective tabernacles in villages as well as in the larger towns.

We now come to that period which bridges the village of the Stuarts with the village of to-day. It was during the reign of the Georges that the more progressive villages, originally with thatched and casemented cottages, were rebuilt, the new cottages being squarer in proportion and sashed and tiled. It was during the eighteenth century that the village industries in many cases gave way under the more highly organised methods of the factory.

At the commencement of the eighteenth century enclosures and open fields were still found side by side, the latter being worked by the successful farmer with hired labour. The open fields were worked by a class who had withstood the oppression of ages, the cottiers and the less successful of the farmer class. And now appear the squatters, a class who at times, when labour was scarce, had gradually edged their way on to the open land.

Between the eighteenth and the middle of the nineteenth century saw the passing of some four thousand special Acts of Parliament for the consolidation of tenancies, and incidentally to enclose common land. There is no doubt that the reform was, from the national and economic standpoint, a sound one, but used as a pretext for enclosing the commons, wastes, and pastures, it was one of the worst and most cruel series of Acts that the country has ever passed, eventually resulting, as it did, in dispossession of the common rights, and of much of the joys and health which country life should give to the rich and poor alike.

THE COAL CONTROLLER'S ORDER OF 1918.*

SOME DEDUCTIONS AND SOME SUGGESTIONS.

It has been suggested that I might be able to give the members of our Club some useful hints in solving some of the acute difficulties that will have to be faced by the majority of us during the coming winter. I do not know that I can help you to any great extent, but I will do what I can.

First of all let me say a word about the coal shortage that exists to-day, the cause of which has been dealt with by the Coal Controller in articles that have appeared in the daily papers.

Coal-mine owners and coal merchants naturally are aware that limitation of output creates a rise in price if the article is a necessity. Much as they may have desired in past years to limit the output with a view to creating a consequent higher price, they have at least on this occasion been prevented from doing so by a wise Government, who, at a critical moment, appointed a Coal Controller. If that had not been done we might have had the same state of affairs that existed at the end of the Franco-German War, when the boom in the iron trade created a great demand for coke and coal. Coal miners, realising their opportunity, demanded higher wages and a reduction of working hours, the effect being that the wage paid to the miners then was about as high as it is to-day—namely, about £5 to £10 per week—a very high wage in those days. The price of coal rose by leaps and bounds until in February 1873 it was sold at 52*s.* per ton in London. The Government was forced by public opinion to appoint a Parliamentary Committee to make inquiries as to the cause of the shortage and high price of coal. Prices fell slowly, and in 1880 coal was procurable at a wholesale price of 14*s.* 11*d.* per ton in the Port of London.

At that time there was the same agitation throughout the country as there is to-day. People endeavoured to discover ways and means of saving coal, and Sir William Armstrong, the then President of the Institute of Mining Engineers, speaking on February 1, 1873, at Newcastle, stated: "It is impossible to conceive any system of heating a dwelling more wasteful than that of sinking a fireplace into a wall directly beneath the chimney, which carries off the products of combustion. Nothing can be clearer than the advantage to be gained by merely advancing the fireplace a little into a room, and constructing it with proper heating surfaces. There is no occasion to shut out the fire from view. Neither is there any difficulty about ventilation, and the quantity of fuel required might thus easily be reduced to one-half." That was a statement publicly made in 1873.

Whether the public took advantage of his suggestion I cannot say, but it would appear to be doubtful, because heating by means of portable stoves was hardly known in this country until recently, and I can only assume that the true reason that we did not adopt the same systems of heating and cooking that had proved so satisfactory, as well as so popular, throughout the Continent and America was due to the fact that coal was soon after easily obtained in this country at low prices. It certainly is a fact that economical heating appliances for burning coal have never to any extent become popular, and we have continued to convert coal into smoke in open fireplaces, sending it up the chimney to pollute the air of our cities. Possibly if we had had to pay in this country the high prices for coal that have prevailed elsewhere, and if, as a nation, we had been less prosperous, the cooking and heating appliances that are for sale would have been altered, and in consequence houses would have been designed by architects and constructed by builders more on the lines of those existing on the Continent.

As regards the excessive use of coal in the kitchen it is, perhaps, not right to blame the public. Let us rather

* An address delivered to the Rotary Club of London at the Holborn Restaurant on October 9 by the President, H. Teeling Smith.

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blame the parties who have charge of the education of the masses. If you go into a class-room where cooking is taught you will find that the children of the poorer classes are being instructed in cooking on apparatus that is not calculated to save fuel; and if you go into the houses that the majority of the working-class people of this country have no alternative but to occupy, you will find the most wasteful contrivances. In country districts it is certainly a fact that the cooking is expected to be done on what is called an open cottage range. If you wish to use the oven of that type of range you have frequently to light a secondary fire under the oven. In the Yorkshire and Lancashire districts the oven is placed in an elevated position to the left or right of the fire, and only a certain amount of the heat generated in the open fire can pass round that oven, the remainder of the heat disappearing in smoke up the chimney. If you wish to boil a kettle over that fire you have to place the kettle on an openwork grid immediately over the fire, and the kettle is quickly coated with soot, thus retarding the process of heating. In Scotland the same antiquated system exists, and I may say that in most country parts of England, although the apparatus differs to a small extent, you find everywhere wasteful contrivances and fuel economy is the last consideration.

There came a time in the history of this country when people conceived the idea that the fire of the cooking range might be utilised to heat water in a large receptacle placed behind it. That water was used for washing purposes. As civilisation progressed baths were installed and connected to this hot-water receptacle. Ever since then the public has been led to believe that it would be foolish and certainly wasteful to use two fires to heat the water and do the cooking. By force of circumstances, British cooking ranges, constructed to place in the recess which the architect has provided for them, are now always arranged so that a boiler behind the fire can supply the necessary hot water. The advance of civilisation has still further created a demand for daily hot baths, resulting necessarily in a demand for a larger tank for the supply of hot water, and in consequence a larger boiler and a larger fire.

Now there is no more wasteful system of heating water than by means of a kitchen fire. The kitchenmaid is blamed by the master of the house because there is not sufficient hot water in the morning, and through want of a better understanding of the contrivance at her disposal she pulls out the boiler damper to its fullest extent, thus creating an enormous draught, which results in the heat generated from the fire being carried a long way up the chimney.

There is another reason why Britishers consume large quantities of coal in the process of cooking. The Britisher has always been fond of roast meat, which in the old days was roasted in front of an enormous fire. Latterly it has been roasted in an oven that has to be big enough to take a goodly-sized joint. The cooking of a large joint necessitates a great deal of heat. If you go to France you do not find open fires for the roasting or grilling of meat, nor do you come across large-sized ovens. French ranges have shallow ovens which naturally require only a small amount of coal. A large oven necessitates a large fire, because it is essential that the flames and heat should get to the bottom of the oven.

There is one further reason why we are extravagant in the use of coal in the kitchen, which is because there is an idea that we must have an open-fronted fire. In every other country except our own the cooking-range fire is entirely closed. In the up-to-date French range you cannot see the fire unless you remove the top cover. The fire is closed to such an extent that only sufficient air is allowed to enter to create the necessary combustion. Every particle of heat is fully utilised.

To-day we are faced with what is almost a nation calamity, so much so that coal is to be rationed in every household. No doubt the Coal Controller would advise people to throw away their antiquated cooking ranges and smoke creating grates, and instal something which might be more economical. But in view of the metal scarcity, which exists to an even more acute degree than the shortage of coal, it is impossible to recommend the use of appliances which are not now procurable to any extent. In any case, in ironfoundries throughout this country the energies of the workers are being concentrated upon Government orders.

In the Coal Controller's recent order he has laid it down that a certain quantity of fuel is available according to the size of the house; that fuel may be taken partly in bituminous coal, anthracite coal, coke, coal briquettes, wood, gas, or electricity.

In order that the public might have some idea as to the heat generated from the different fuels available, I prepared a leaflet, a copy of which has been placed before you. This was printed some months ago, and is already out of date as regards the price of fuels obtainable, but is, nevertheless, useful as giving some comparisons. There are very few of us who have ever really considered how much heat we can get from a given quantity of fuel. I would refer you specially to the fourth page, and you will find what it costs to heat a room of a given size by different methods. You will notice that notwithstanding the fact that a closed anthracite stove is kept alight for twenty-four hours per day, the fuel consumption for a winter of twenty-six weeks is very little over one ton of anthracite; that if you use coke (as you receive it to-day) you will consume a little more than two tons; and if you use ordinary coal in an open fireplace, burning only fifteen hours per day, you will consume about 2½ tons.

You will see from the leaflet what the costs are. You will notice that a properly constructed stove, burning anthracite at nearly £3 per ton, is costing you less than if you were to burn coke in the same stove, and still less than if you were to burn ordinary coal during the day only in an open fireplace. I have laid particular stress upon the use of anthracite and the advantage accruing therefrom because the Coal Controller has recommended that those who have suitable stoves should burn anthracite, in view of the fact that the anthracite mines are not working to their fullest capacity. You will also notice that if you continue to use your gas stove the consumption in fuel will be enormous, but nothing like so great as it would be if you continue to use your electric radiator.

At the foot of the page you will see how far the Coal Controller's ration will go according to your decision as to what fuel you will use. It may be that because you have installed a gas stove or an electric radiator you will have to continue to use that system of heating, but probably you have not had an opportunity of calculating the exact amount of electricity you use per hour in your radiator, or the exact amount of gas you have consumed in your gas stove. I would suggest that you take the leaflet home with you and carefully consider these points.

Now let me give you a word or two of advice. As regards the heating of rooms, I would strongly advocate the installation of independent closed stoves, such as were recommended in 1873 by Sir William Armstrong, and which since then have been improved beyond recognition, taking the form of closed anthracite stoves, the heat regulation of which is completely under control. These stoves burn continuously. They abolish daily lighting and yearly chimney sweeping.

If your house is of fair proportions do not attempt to get a suppy of hot water from your range fire, but instal a separate slow-burning independent boiler. The fire of that boiler is surrounded by water, which heats quickly and gives you all the hot water you require at any time of the day or night. I can assure you that the coal consumption in your kitchen range and your independent boiler will be less than in the one fire of a range which is expected to do both the cooking and the heating of water. The ideal cooking range should have a closed fire, the air supply should be under complete control, the oven should be shallow, and there should be no boiler at the back of the fire.

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If by chance any of you have a large cooking range and a boiler at the back of the fire, and may wish to use the fire of that range occasionally for heating water, it is possible to place in front of that range a small portable range, which can be connected to the same chimney in such a way that either of them can be used. The portable range would probably be sufficient for present needs considering the possibly reduced size of your family and the small allowance of meat now procurable. The resulting saving in coal would be very considerable.

I might mention that the Coal Control Department is doing its utmost to grant permits for the making of economical coal cooking and heating stoves, but there are other Government Departments interested in metal economies whose consent it is difficult to obtain.

Let us in conclusion express the hope, now that the Allies have successfully pushed forward and freed certain coal areas in France, that the acute necessity for coal economy may ultimately be relieved, and that we may soon be able to return to normal times and the luxury of well-lighted and adequately heated homes.

Extract from the Leaflet referred to.

TABLE OF FUEL ALLOWANCES.

For not more than	Metropolitan Area and South of England	Rest of England and Wales, above line drawn roughly from Wash to Severn.
2 rooms	3 tons	3½ tons
3 ,,	3½ ,,	4 ,,
4 ,,	4 ,,	4½ ,,
5 ,,	4½ ,,	5 ,,
6 ,,	5 ,,	6 ,,
7 ,,	6 ,,	7 ,,
8 ,,	7 ,,	8 ,,
9 ,,	8 ,,	9 ,,
10 ,,	9 ,,	10 ,,
11 ,,	10 ,,	11 ,,
12 ,,	11 ,,	12 ,,

TABLE OF LIGHTING ALLOWANCES.

For not more than	Cubic Feet of Gas.	or	Units of Electricity.
3 rooms	7,500	...	120
6 ,,	11,250	...	180
9 ,,	15,000	...	240
12 ,,	18,750	...	300
15 ,,	22,500	...	360
18 ,,	26,250	...	420
21 ,,	30,000	...	480

One ton of fuel (as in the top table) will be equal to—

One ton of ordinary household coal.
One ton of anthracite coal.
1½ ton of coke,
1,000 2½ lb. briquettes.
15,000 c.f. of gas.
or 800 units of electricity.

HEATING A SITTING-ROOM OF 18 FT. BY 16 FT. BY 9 FT. (2,592 C.F.)

Under average conditions, at prices prevailing in London.

Period of Burning	Ordinary Coal in Modern Grate at 42/0	Anthracite in "Esse" Stove at 59/6	Coke in "Esse" Stove at 44/0	Gas in Modern Gas Stove at 4/4	Electricity in Latest Radiator at 2¼d.
1 hour ...	2 lb.	10 oz.	18 oz.	36 c.f.	3.4 units
1 day (15 hrs.)	30 lb.	*15 lb.	*27 lb.	540 c.f.	51 units
1 week ...	210 lb.	*105 lb.	*189 lb.	3,780 cf.	357 units
26 weeks ...	5,460 lb.	*2,730 lb.	*4,914 lb.	98,280 c.f.	9,282 units
Cost per winter for 1 room in constant use	£5 2*s.* 3*d.*	£3 12*s.* 6*d.*	£4 16*s.* 6*d.*	£21 5*s.* 9*d.*	†£87 10*s.* 4*d.*

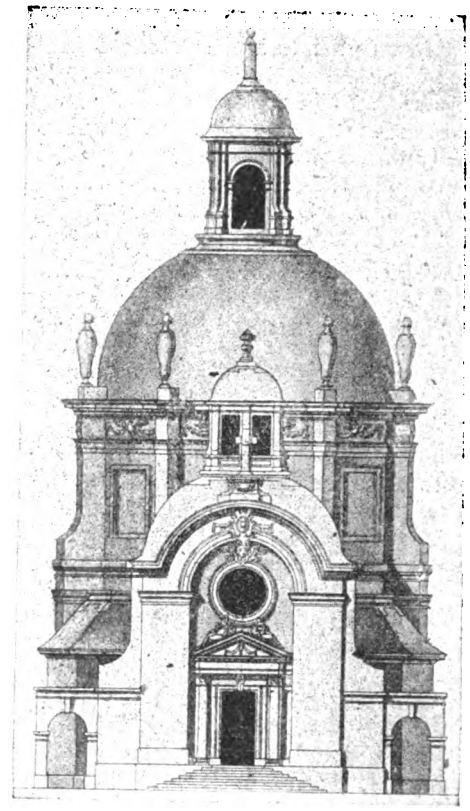
* Per day of 24 hours instead of 15 hours.
† If at 1*d.* per unit, £38 13*s.* 6*d.*

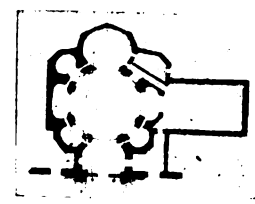
PARIS IN 1808.*

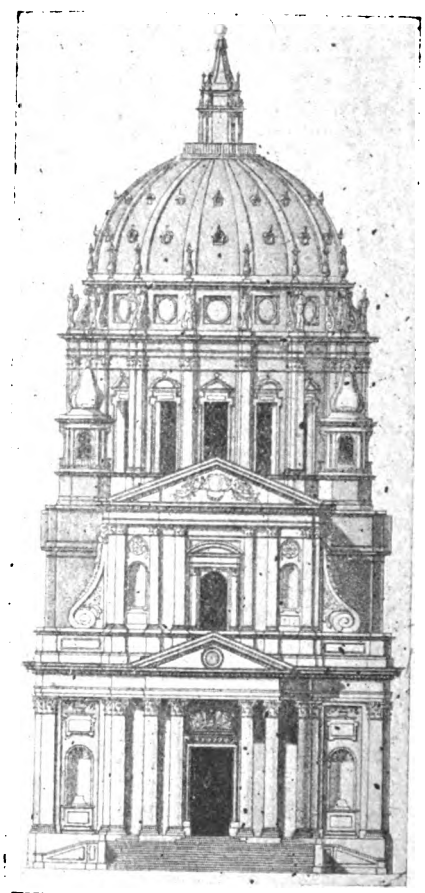
NO. 3.—CHURCH DE LA VISITATION DE SAINTE-MARIE, RUE SAINT-ANTOINE.

THIS church was an early work of François Mansart, and was built in 1632 from his designs. The community for whom it was built were so named because they consecrated their lives to attending the maladies of the poor and sick. The cloisters and other buildings had been demolished or sold in 1808, the church only remaining, and it was subsequently used as a Protestant church.

* This series of illustrations is from an old work on Paris in the year 1808.







NO. 4.—THE CHURCH OF VAL DE-GRACE, RUE DU FAUBOURG SAINT-ANTOINE.

THE abbey church of Val de Grace was founded by Anne of Austria in 1645, in gratitude for the birth of Louis XIV. François Mansart was its first architect, Le Mercier carried the work up to the springing of the dome, and Le Muet completed it.

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Monthly Review of Decoration and Furniture.

A SHORT CHAT ON THE LONG-CASE CLOCK.

The long-case or "grandfather" succeeds the brass lantern or "birdcage" clock about 1670, and at the same time replaces a mechanical instrument of metal by a piece of furniture made principally from wood. The long clock, in consequence, obtains a predominance and importance not possessed by its smaller predecessor. It must be remembered that at this period instruments of timekeeping were rare, and confined to the upper classes almost exclusively. The bulk of the English nation arose with the sun and went to bed with the dusk. Appetite regulated the hours of meals. The portable timekeeper was the pocket watch or the lantern—the true "bracket-clock," as a bracket for its support and to allow of the fall of the weights or the swing of a long pendulum was a logical necessity.

It is easy to understand the popularity of the long-case clock. It was an important and decorative piece of furniture; it required no defacing of walls by the fixing of a bracket; it could be placed in any position, and, above all, it was a novelty.

It is a curious point with regard to furniture (and the same is probably true of many other things) that new types are always logical and fitted for the purpose for which they were made. It is only in the later stages of development that the decorative begins to override the utilitarian. Thus the early Stuart oak chairs are nearly always ideal, sturdy and comfortable. The Restoration chair is lighter, but still constructional. The type degenerates with the later Jacobean period into the flimsy and badly designed Flemish models, with front legs dowelled into seat frames and back crestings attached to the outer uprights by wooden pins. New life is introduced during the first years of the eighteenth century, and the evolution begins again to culminate in the Chinese and Rococo absurdities of Chippendale. This rhythm may be noticed, at more or less definite intervals, up to the present day. The early cabinets fulfil the cabinet function—to hold things; the early tables are rigid and were made to support weights. An apparent contradiction of this rule is the sideboard, which, at first, has neither cupboards nor drawers, yet in the hands of the Heppelwhite and Sheraton schools becomes a repository for wine, napery, cutlery and glass. This contradiction is more apparent than real, however. The side-*board* is, as its name implies, a side-table; it changes at a later date to a combination of cupboard and chest of drawers, the functions of neither of which properly belong to it.

The development of decorative type with concomitant loss of utility and purpose is very evident when we trace the rise and decline of the "grandfather" or long-case clocks from about 1670 (the dawn of the type) to 1800 or later. The function of a clock is, primarily, to show the time, and to do this in the most legible fashion. For this reason, a clockmaker does not put his dial at the bottom of the case, but many of the later makers did things nearly as bad. Dials 8 feet in the air, minute and hour hands identical but for a trifling difference in length, hour numerals of insignificant size and a general blurred type of dial are all characteristics of many of the late long-case clocks. With the work of the renowned makers, such as Tompion, Knibb, East, Gould, Gretton and Quare—to name only six from a host—it is a pleasure to note how everything is subordinated to the one function of a clock—to show the time—without deteriorating in any way from its decorative value; in fact, the latter is cleverly enhanced by the obvious purpose of each detail. The early long-case clocks are never assertive, therefore as furnishing pieces they never disturb a harmonious decorative scheme. The cases, although good, are usually plain, thereby not detracting from the focus point of the clock itself, the dial, where fine workmanship and choice detail was expended. Above all, these early clocks are refined; there is no hint of the vulgarly ornate character which debased much of the later horological work of the English clockmaker.

The early English made long-case is a thing of quiet beauty, such as Nos. 1 and 2 of Plate I., for example, the work of Joseph Knibb. There is enough of the architectural character to satisfy the purist, yet not so much as to make the case look like a building or a monument. I have selected these not as the earliest known long-case clocks, but as representing the first in which the type becomes rigid and fully developed. The cases are of oak, veneered with ebony and with solid mouldings of the same wood. The dial of No. 1 is shown on page 216, and will repay careful examination. Attention may be drawn to the narrow hour-ring, the Roman numerals squat but distinct, the minute divisions on the extreme outer edge of the circle so that the movement of the slender minute hand—which just reaches these divisions—may be followed, the seconds dial ring distinct from the hour circle instead of cutting into it as in so many of the later clocks, the winding holes quite simple instead of being accentuated by moulded rings round them—as if holes could be things of beauty to be emphasised—the beautiful cherub-head corner or spandrel pieces, and last, but not least, the finely pierced and "carved" hour hand. The clock is of month duration between windings, the hour and seconds circles are of solid silver, and the dial and corner pieces are water-gilt. The striking system is peculiar to Joseph Knibb, and is on the principle of the Roman numerals. Two bells of high and deep tone are provided, the former being struck once, twice, or thrice for one, two and three o'clock. One stroke on the high and one on the low bell marks four o'clock, one on the deep bell for five, and two on the same for ten. The remaining numbers can be understood from the foregoing. The system has the advantage of conserving the striking power. It is obvious that the striking weight only falls when the clock strikes the hour, at other times it remains stationary. The clock being of month duration has to have a striking train to correspond, and Knibb's Roman numeral plan necessitates thirty blows of the hammer instead of the usual seventy-eight in the twelve hours.

To speak of early English clocks at their best is to mention Mr. D. A. F. Wetherfield's incomparable collection at Blackheath. Mr. Wetherfield has collected with such discrimination and for so long that in point of quality, number and variety there is nothing to parallel his collection. So many of us are indebted to him and his clocks for nearly all we know on the subject of English horology at the present day, the more so as he has so many aristocratic specimens, such as the two Knibb clocks illustrated here which have never come into the sale room or the general market, and which no other private collection can show. No. 3 is another of Mr. Wetherfield's clocks by Thomas Tompion, the father of English clockmaking, and fig. 2 shows its dial. No. 4 is another example, the work of William Clement, who introduced the "anchor" escapement to English makers of long-case clocks. This example has a pendulum with a swing of 1¼ seconds' duration. It is perhaps not generally known that the seconds dial of a long-case clock only marks the swings of its pendulum, and, leaving out decimals, a pendulum with a length of 39 inches from the bending point of its "suspension" to the centre of gravity of the entire pendulum has a swing of one second duration, whether the arc of swing be large or small. With a 1¼ seconds' duration the length has to be 61 inches, from which it will be seen that the pendulum bob must swing in the base instead of the trunk of the clock.

The marqueterie case is an introduction from Holland, and does not evolve from the simple to the complex in England. These showy cases were received very conservatively by the renowned makers; Tompion rarely if ever used them, and Knibb and Quare only followed the fashion at the very end of their business career. It is

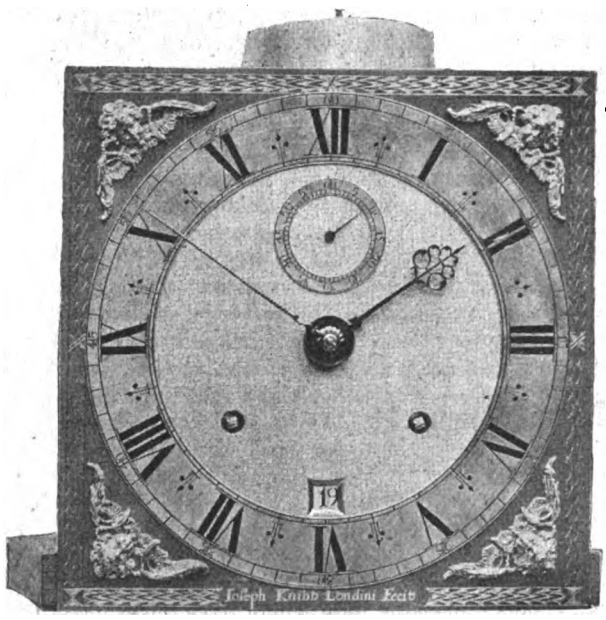
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doubtful if these marqueterie cases were ever made in England at all. I am inclined to think that English makers ordered their cases from Holland, beginning nervously with a simple inlay of stars and fans such as No. 5, and finally launching out boldly with florid specimens such as Nos. 6, 7 and 8. The search for novelty—fashions changed rapidly at this period—resulted in mosaic marqueterie (No. 9) and the arabesque inlay of No. 10. The fashion culminated in No. 11, a month clock in a magnificent case, the hood supported on carved gilt trusses, with carved terminals to correspond. Rooms were loftier in the early years of George I., and long-clocks were made to correspond. Dials also became larger, 10 inches square being the usual size from 1670 to about 1685, 11 inches up to 1700, and 12 inches up to about 1720, when the arched dial replaced the square form in popular esteem.

No. 12 is another example from Mr. Wetherfield's collection, a splendid clock in a case of black lacquer. Fig. 3 shows its ornate dial, signed across the bottom of the dial-piate Christopr. Gould, Londini Fecit."

No. 13, from the same source, shows the first phase of the arched dial, the arch low—rarely as much as a half-circle—and with hour divisions marked on the inside of the hour ring. No. 14 is the 1740 version of the arched dial clock, in plain case veneered with rich burr walnut.

From about 1740 to 1760 the long-case clock appears to have lost its former esteem, popular favour veering to the bracket clock, but from 1760 onwards it again

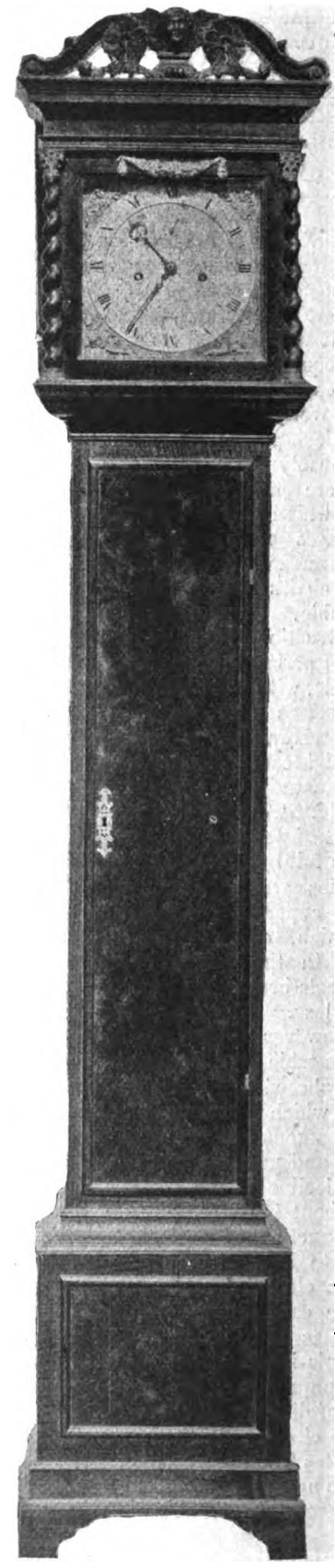


Clock Face.

comes into vogue, and the new type, shown in Nos. 15 and 16, remains fixed, more or less, until well into the nineteenth century.

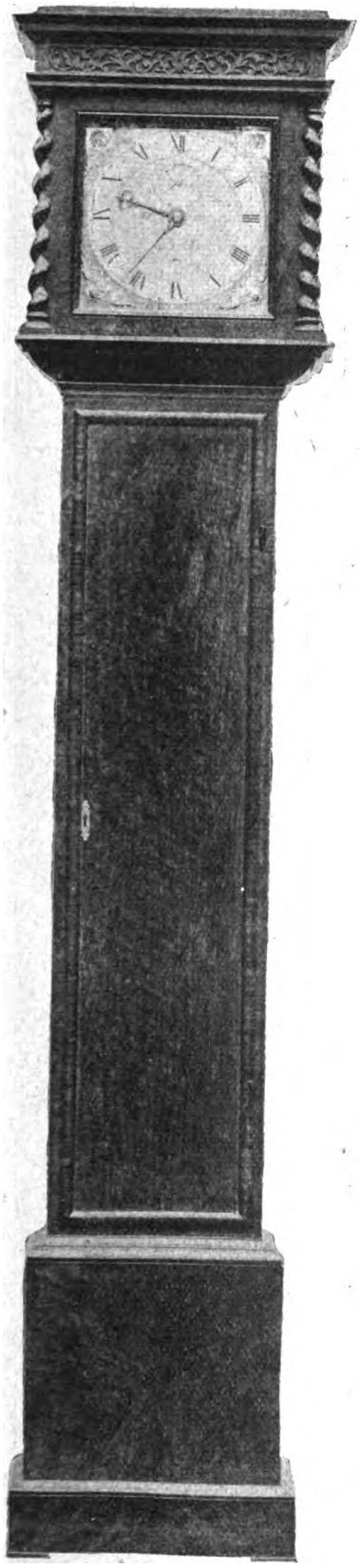
Space forbids the illustration of any examples showing how the long-case form became debased in the hands of provincial, and especially the Yorkshire and Lancashire makers, nor would any good purpose be served by their inclusion. I have illustrated the aristocratic examples of the various periods, and this should be some guide, not only as to what to collect, but also what to leave alone.

Clock collecting is a fascinating pursuit. Although, broadly, these long-cases can be resolved into certain types, yet in points of detail nearly every fine example is in a class by itself. Within the last seven or eight years only have they appreciated to anything like their proper value. Considering their original cost—the early examples were only made for the very wealthy—and the time and care lavished on their manufacture, it is only bare justice that they should have come into their own, and that the most individual craft which England has known, one which reflects the pride and skill of the craftsman in the greatest degree, should be treasured and conserved by its cultured collection in these days of commercialism and machine-made production. H. C.

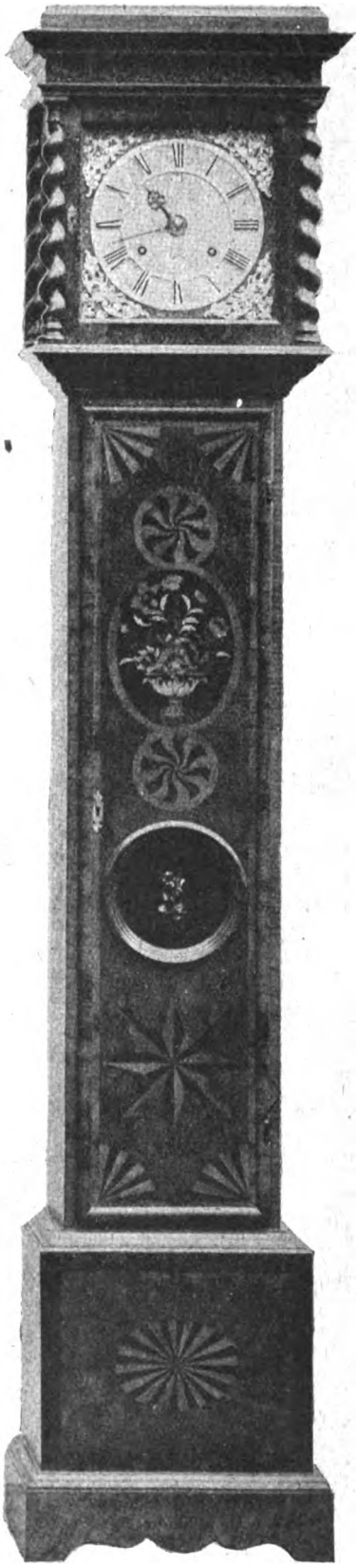


No. 3.—Thomas Tompion, London. Burr walnut case, 8-day striker. 6 feet 9 inches high. 9½-inch dial. 1680. Collection of D. A. F. Wetherfield, Esq.

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No. 4.—William Clement, London. Burr walnut case, month striker. 1½ seconds pendulum. 10-inch dial. 1675-80. Collection of D. A. F. Wetherfield, Esq.

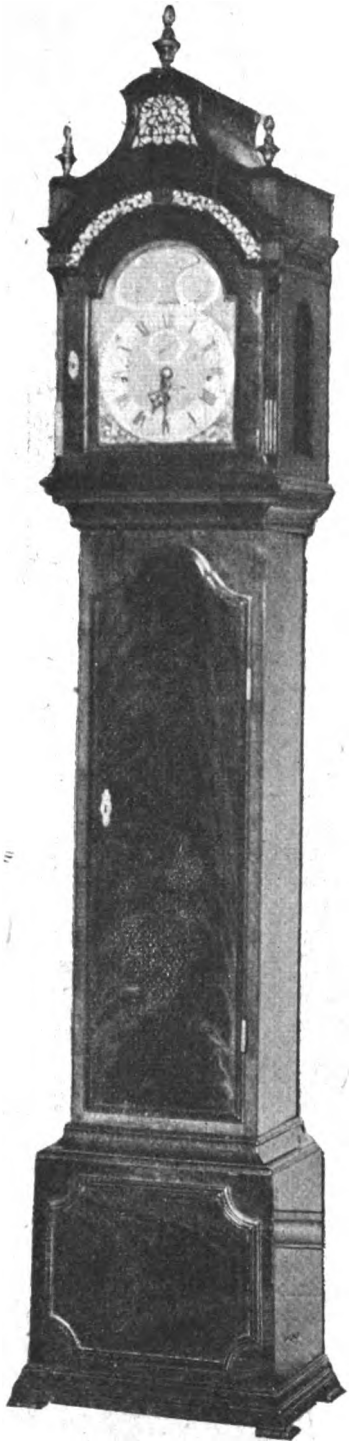


No. 5.—Joseph Knibb, London. Marqueter'e case, month striker. Skeleton dial. 6 feet inches high. 10-inch dial. 1680-90. Collection of D. A. F. Wetherfield, Esq.

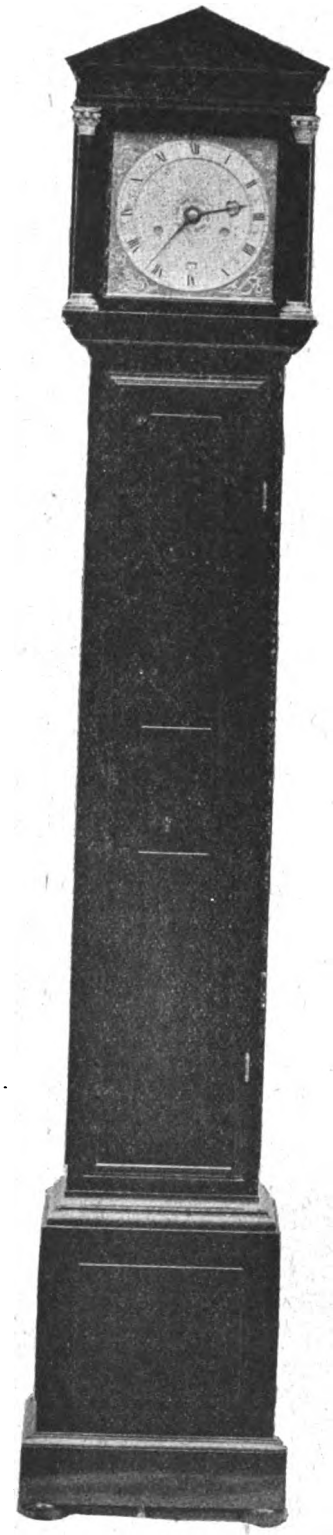


No. 11.—Henry Harper, London. Arabesque marqueterie, month striker. 8 feet 2 inches high. 12-inch dial. 1705. Collection of Lord Rothermere.

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No. 16.—Mahogany 8-day clock. Type from 1765 to 1820.



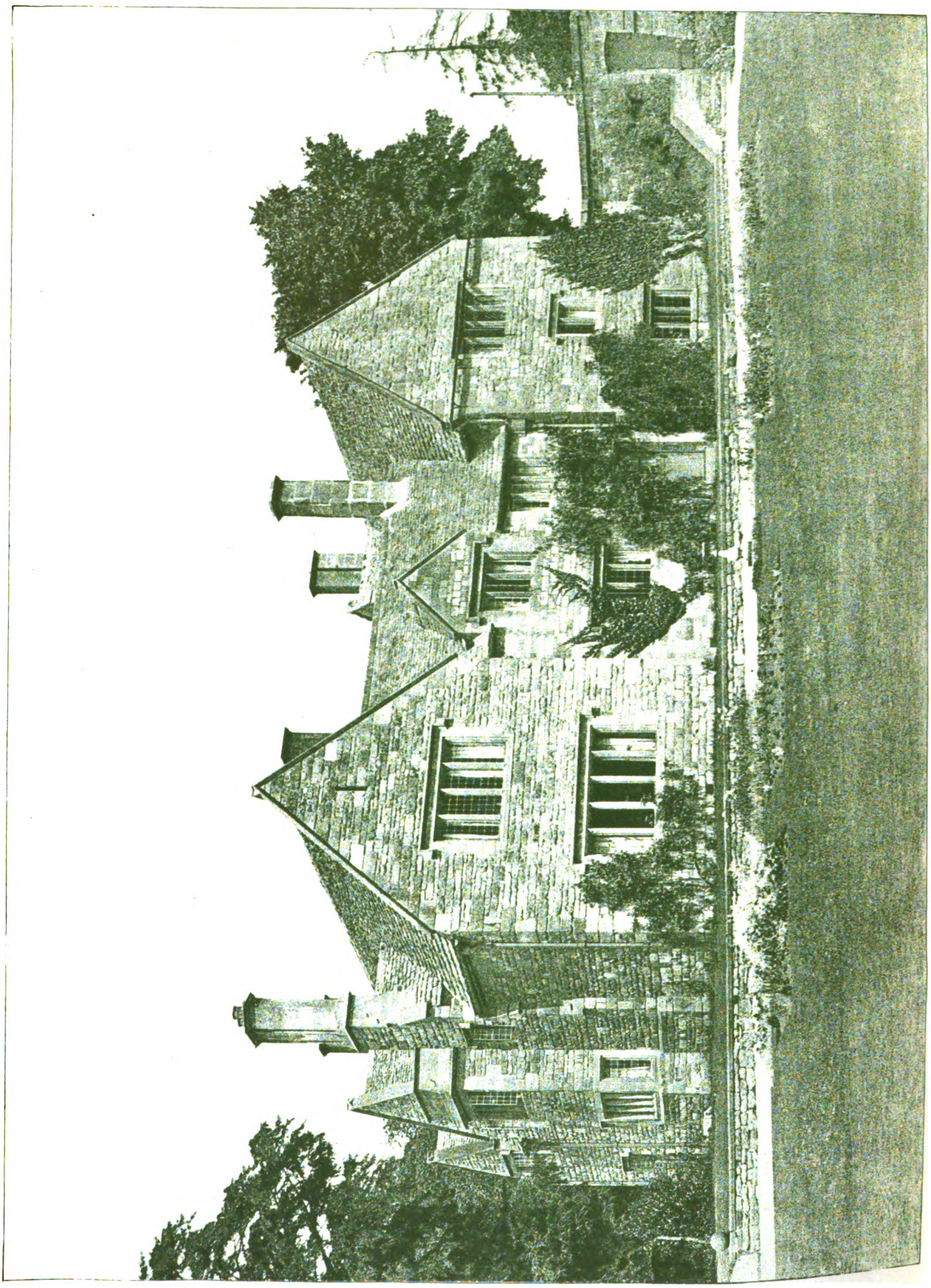
No. 2.—Joseph Knibb, London. Ebony case, month striker. 5 feet 11 inches high. 10-inch dial. 1685. Collection of D. A. F. Wetherfield, Esq.



No. 14.—Arched dial, plain walnut case of 1735-40 period. 7 feet 4 inches high.

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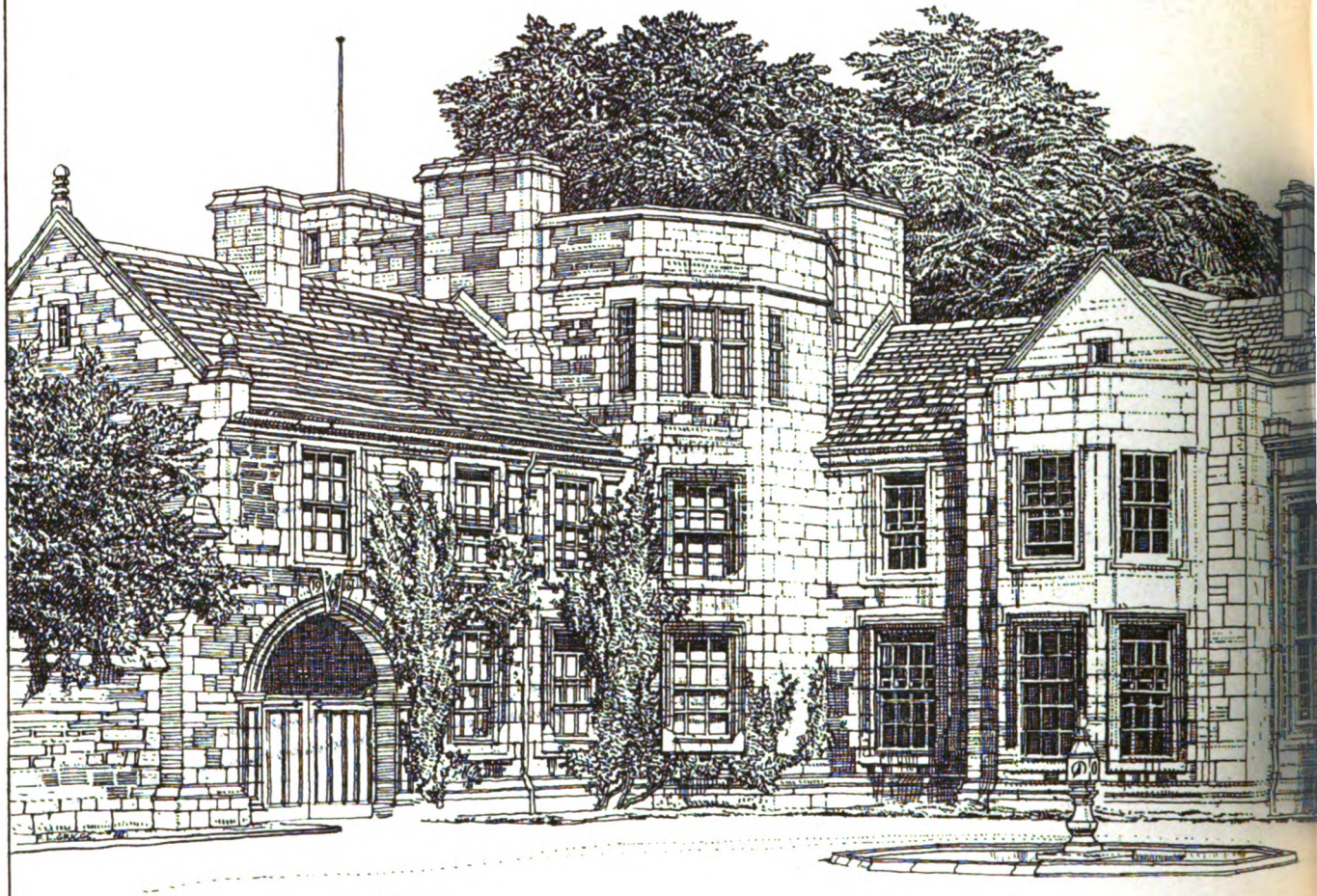


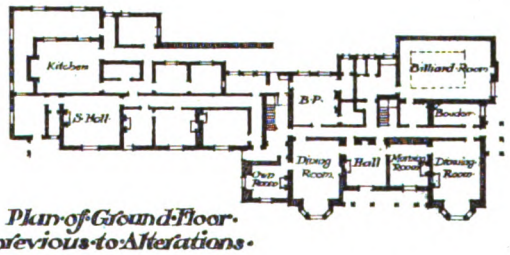
THE COURT HOUSE, BROADWAY.

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Plan of Ground Floor previous to Alterations.

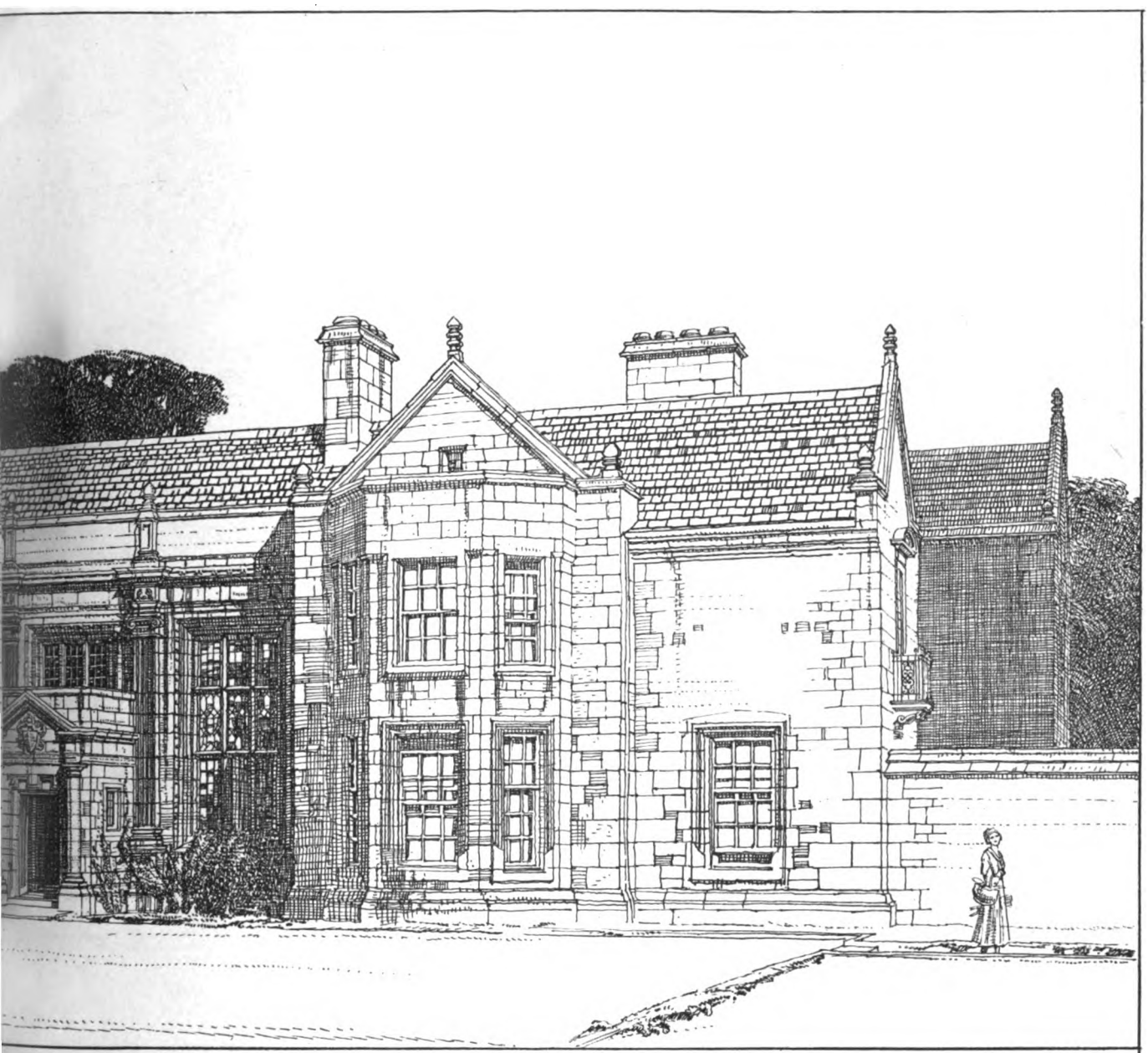


Sketch of House

Scheme for proposed Reconstruction of JERVAULX

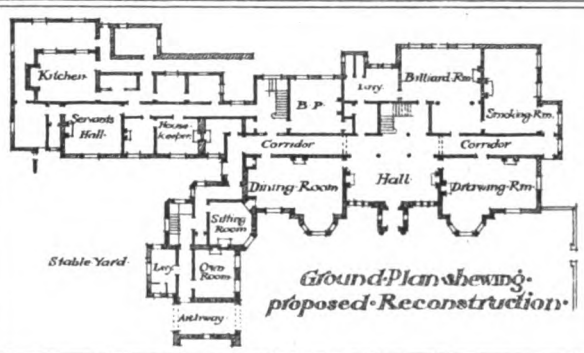
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Oct. 18th 1918.





to Alterations.



Ground Plan shewing proposed Reconstruction

Walter H. Brierley F.S.A.
Architect
Lendal · YORK.

BEY · YORKS · the Tower and Wing of which are already built ·

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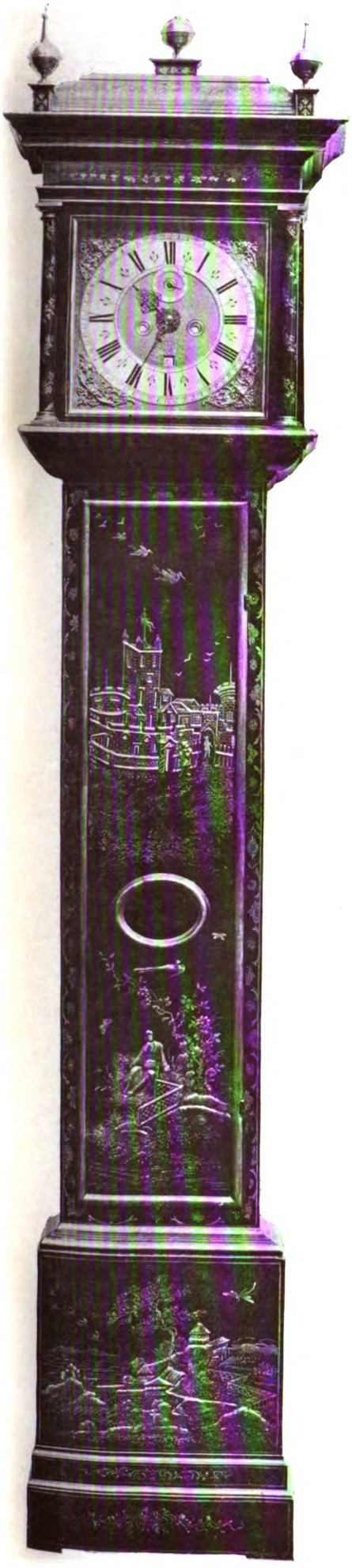


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No. 12.



No. 13.



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(See Review).

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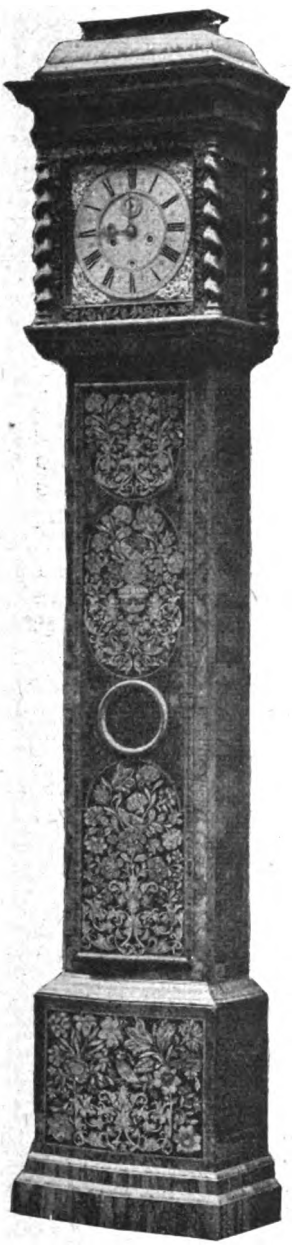
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WYNN'S PARC, DENBIGH.

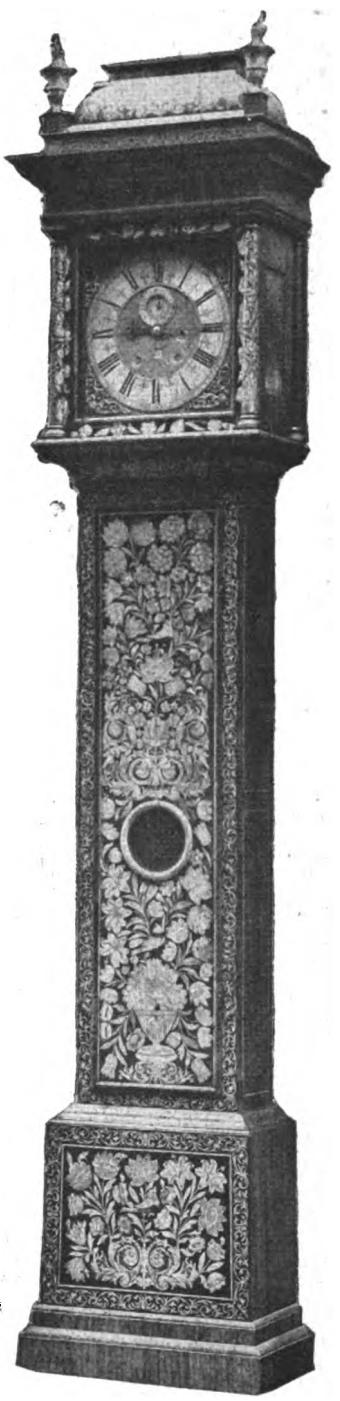
E. GUY DAWBER, F.R.I.B.A., ARCHITECT.

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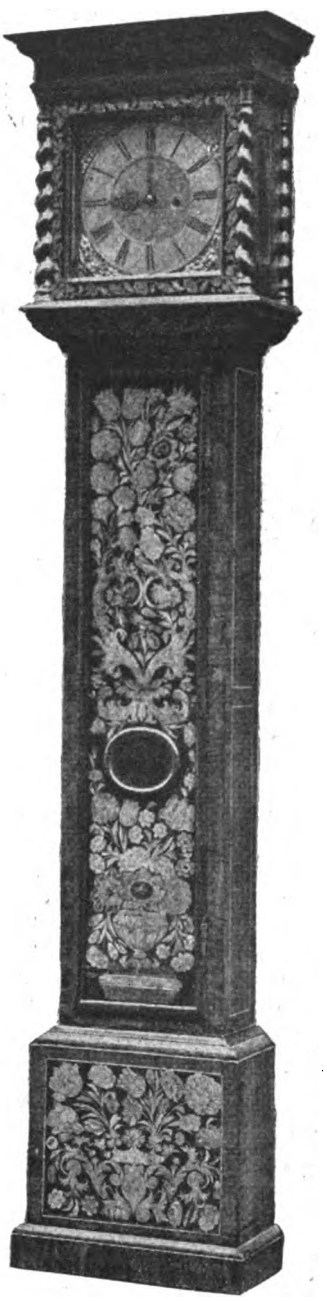
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No. 6.—Example of floral marqueterie n panel. 1700.



No. 7.—Example of all-over floral marqueterie. 1705



No. 8.—All-over marqueterie. 1700.

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CORRESPONDENCE.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

German Post-War Plans.—Glass a "Key" Industry.

To the Editor of The Architect.

Sir,—On behalf of the members of the Glass Industry Interim Industrial Reconstruction Committee, which has been formed (under the ægis of the Ministry of Reconstruction, the Board of Trade and the Ministry of Labour) of an equal number of representatives of employers' associations and employees' unions in every section of the glass industry, I hope you will allow me to call attention through your columns to the vital significance to this country of certain trade developments contemplated in Germany.

We learn from the German Press that after the war Germany will seek to restore her credit abroad by a concentration of effort upon the export of certain chosen manufactures. Chemicals are named as the first of these manufactures, then comes glass.

Now, Sir, the glass industry of the world is not in the first rank of importance in the eyes of Germany because of its relative size and volume, or because of the wealth it will directly bring to the German people. There is another and a greater reason than that. The reason for the choice of glass is this, that it is a key to the gate of many other industries. A nation holding a monopoly of glass could hold up nearly all other trades. We can make hardly anything without using glass at some stage of its manufacture, even if glass is not an actual part of the finished product.

Here usually glass is part of the finished product, perhaps in no great quantity, but however small its use, wherever it is it fulfils a rôle that is essential. Our welfare and comfort in health and in sickness, our ships, our trains, our homes, our food, in almost every side and thing of life glass has its place.

And not in peace alone but also in war. When the history of the war is laid bare it will be found that the difficulty of making glass for lenses and prisms, and for test tubes, crucibles, and retorts, hampered the work and equipment of our fighting forces to a dangerous extent, and tremendous efforts were needed to save the situation. When the history of the anti-submarine campaign is written it will be found that glass played an important rôle.

Before the war the British glass manufacturer and his men had, owing to Germany's hold, little chance of profit or employment. Under war conditions it has been difficult to produce the vital requirements of the country fast enough. There is now an opening in this trade for investment of capital and for well paid, skilled labour. Will it last? It will be in danger after the war if not supported in a prompt and practical way.

At a recent meeting of the Imperial War Conference there came up for discussion the freeing of industry in Great Britain from dependence on German dyestuffs. Now you cannot make dyes or any other product without glass. Yet we do not read that the Imperial War Conference has discussed British dependence on German glass.

Our industry is ready to do its part, the manufacturer is ready to put into his works the best available plant, and the workmen are prepared to use this plant to the best advantage. This is a big job, but it does not frighten us. We only ask of our rulers and of the public that they will give to glass its proper position in the national life of the country.

We want to manufacture in Great Britain under conditions that will give: 1, security and return to capital; 2, security and a return to brains (management and technical advisers); 3, security and substantial wages and good conditions of employment to our workers.

To put our trade in a good position to meet the future progress has already been made. In the Society of Glass Technology we have a common meeting ground for labour, capital, science and technics, and every branch of the industry is to be represented on our committee and the district councils under it. We are organising ourselves.

But this is not enough. Germany's rise has been attributed directly to the English policy of the "open door." We of the glass industry fear that the policy of the open door may be carried to such an extent that the British glass industry may become extinct.

On this point employers and workers think alike. Reform of this condition and help during our reconstruction period is not a political question but a business proposition. The German Government will spare no pains or expense to secure return to their virtual monopoly in optical and chemical glass, and their commanding position in glass generally, because they perceive very truly how that return would lead to supremacy in other industries and manufactures. The British glass industry does not intend to allow this return if it can help it. But we ask from our rulers some support. We do not ask them to bolster up an inefficient industry so that we may make profits at the expense of the nation, but we do ask that the industry be given the chance of full development, and that a "key" industry be saved from the hands of Germany, determined to capture it at all costs because it is a "key."—Yours, &c., John Stokes.

Chairman of the Glass Industry Interim Industrial Reconstruction Committee.

34 Newington Green, London, N. 16: Sept, 1918.

To the Editor of The Architect.

Deadwood.

Sir,—Why does the Government hold up Professor Groomes' scheme for scientific work in timber for mines and house building? We are told it is because the timber trade does not give the scheme adequate support. People who sell such inferior wood as deadwood are not likely to further such a scheme—part of their living would be gone. Take a pre-war issue of the "Timber Trades Journal" and notice the descriptions of the import of this diseased timber. You will at once see the alarming proportions in which the timber has been used since 1880, when it was first introduced.

It is not healthy. Such wood is lifeless. No one can argue that dead wood is good wood. Decay must attack it very soon. Dry-rot is the most likely disease. Put it into a closely confined space, and the terrible consuming fungus soon commences its work. It is wood admittedly dead, bought by the merchant as dead, but how often sold as dead?

My house is 300 years old. The wall panelling is as good and healthy as when it was fixed, for it is oak. But the deal floorings were so honeycombed with worms that spilt water was directly soaked up. I was obliged to relay with new floor boards.

Here is proof, if proof were needed, that the life had gone out of the deal (red-wood) boards; worms had attacked them, they crumbled to dust; the nature had died out of them, and hence they were useless.

When even healthy trees are cut down, in a few hundred years the life gradually dries out of them and then decay sets in. If the trees are lifeless before being felled, they are dead vegetable matter and should be tabooed.

If a Government Department were appointed to scientifically investigate timber under all kinds of atmospheric conditions it would do very good work, and I am sure there would be an end to the importation of these inferior soft timbers.

The two chief Architects' Associations ought to interest themselves in the matter because of the legal liability to architects.

The Royal Institute of British Architects once held a discussion on the matter of an architect being legally held responsible because dry rot had made its appearance in a building even some years after it had been erected, and in this particular case the architect was held responsible.

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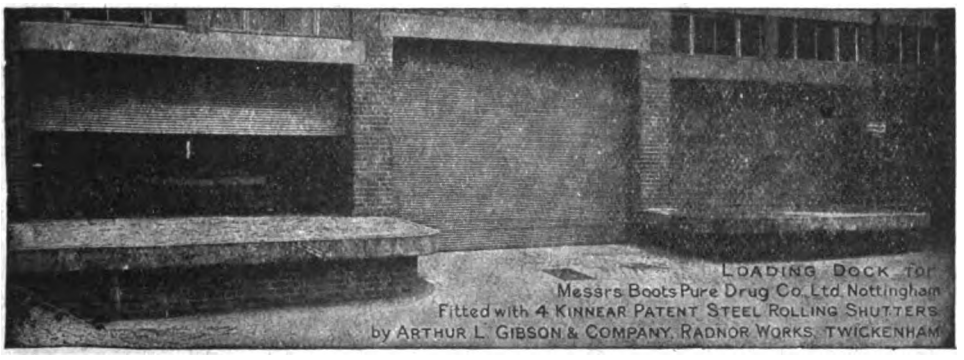
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The endeavour of the Institute was to try and define the duties of an architect, so as to relieve him of the responsibility in such cases, but the law has not been altered on this point, and the architect is, as he has always been, responsible when dry-rot sets in in buildings of which he has had control.

A builder said to me some time ago that a stack of timber he had just got in was the best he had ever had, because not only was it free from knots, but there was not a particle of sap in it. He said it was almost too good to use for joists. It was only my emphatic knowledge of this wood that convinced him that he was using deadwood. Indeed, it is not to be wondered at that many builders and architects are entirely ignorant of this inferior wood. Apart from the question of the reddish hue, there is nothing but the light weight of the wood to distinguish it from good timber.

For these reasons I assert, and maintain strongly, that an Act of Parliament should be passed prohibiting the use of diseased or dead timber, except when it is cut into thin slabs of only a few feet in length, so that it cannot be used for anything else besides box-making or similar work. No one would then be injured, the exporters and importers of deadwood would then still be able to sell their deadwood, and no disarrangement of commerce would result.

Perhaps some of the eminent architects now so closely in touch with the Government will further Professor Groomes' scheme for the sake of the general public, even if the legal liability of the architect is treated as of little or no consequence.—Yours, &c.,

J. H. Kerner-Greenwood.

King's Lynn: October 10.

THE HOUSING PROBLEM.

Extract from the "Sheffield Telegraph," October 2. (Leading Article.)

We give a report of a very important pronouncement on the Housing Question which reaches us as we are going to Press:—

We do not think the Housing Conference in Sheffield yesterday accomplished much, or added much to the general knowledge of the subject. Delegates went round and round the President of the Local Government Board, and the President went round and round the delegates, with the result that things remained at the end very much where they were at the start. The problem is an acute one. We must have more houses. Sheffield has 20,000 houses which, if the sanitary authorities were rigidly strict, would be condemned. It wants also thousands of new houses for new families; and every town in the country is in the same condition, for the building of working-class houses has ceased. Even if the materials were available, the cost of building is too great for private speculators. The solution suggested is that the municipalities shall build, that the houses shall be let at less than their paying value, and that the Government shall make up 75 per cent. of the loss. The other 25 per cent., estimated at a penny in the £ on the rates, is to come from the towns. In other words, the houses are to be subsidised in part from a man's right hand pocket, and in part from his left hand pocket. All the people are to be both taxed and rated to provide houses for some of them.

We are not satisfied that this is the only solution of a difficult problem. It may look like the easiest solution. But if the people who live in the best and healthiest houses are to be subsidised by those compelled to live in poor, unhealthy tenements, such a sense of injustice will be created that the State will be compelled to pay a portion of every man's rent. Surely the experiences of the war have taught even the Local Government Board that there are various ways of killing cats. It seems to be content to do what municipalities did before the war. The Conference was told that Manchester is paying £20,000 a year out of the rates to make up for housing deficits. That system is to be perpetuated. If it is, then ratepayers will be more interested in cheap houses than in healthy houses; and, in self-defence, towns will have to build slums in which to rear C3 people instead of model villages for the development of a race of A1 men and women. Our advice to the Local Government Board is to begin to think out this problem again, with special study of what has been done, and what might be done, to control prices and influence wages. The aim should be a healthy home at an economic rent for every man. There are few working men now who could not pay a fair rent for a good home. Are we to believe that peace will be less bountiful than war, and that what men can afford to do now they will not be able to afford when the "blessings" of peace return?

THE LONDON SOCIETY.

THREATENED APPROPRIATION OF THE ADELPHI.

The London Society has issued the following notice to its members. We shall comment on it in our next issue, as we are not able to do so at this late date:—

Sir,—You are invited to attend a meeting which has been arranged by the London Society, to be held in the Hall of the Royal Society of Arts, 18 John Street, Adelphi, W.C. 2, on Thursday, October 24, 1918, at 4.30 p.m., to consider the grave risk now threatening the Adelphi Estate (which is full of priceless relics of the Adam Brothers' work) by reason of its proposed appropriation by the Air Board.

While we are only too anxious for patriotic reasons not to stand in the way of any Government work, we are firmly of opinion that more suitable premises could be found than are available on this estate, because its houses are of small area and could not be made suitable for the purposes of the Air Ministry without irreparable damage being done to the exquisite interiors.

The Right Hon. Lord Aberconway, P.C., K.C., has kindly promised to preside at the meeting.

It is particularly hoped you may be able to attend.—Yours faithfully, Aston Webb,

Oct. 12. Chairman of Council.

GENERAL.

Mr. A. F. Webb, of Blackwood, has been appointed architect for Rhymney new housing scheme.

The death is announced as having taken place, from heart failure, following influenza, at Trouville, France, of Mr. Charles Bruce Wood, surveyor, for over thirty years connected with the firm of Messrs. George Trollope & Sons.

Captain Roger Liddesdale Palmer, London Regiment, in hospital in London, has been awarded the Military Cross. Captain Palmer is an architect by profession and served his articles with Mr. Percy Robinson, F.R.I.B.A., 2 Albion Street, Leeds.

On Saturday Queen Alexandra visited Norwich for the purpose of unveiling the statue which has been erected to the memory of Nurse Edith Cavell. A fund has been raised to purchase the freehold of the Queen's Institute of Nurses and erect a pillar and statue in front of the home.

A memorial window, the gift of the President, Councillor Walter Appleyard, Deputy-Mayor, has been unveiled at Walkley Reform Club, Sheffield. The war memorial is particularly interesting, as let into panels of the window are actual photographs of the men who have fallen in the war.

A conference on the place of conciliation and arbitration in the Whitley scheme will be held under the auspices of the Industrial Reconstruction Council on Tuesday, October 22, at 6 p.m., in the Hall of the Institute of Journalists, 2 and 4 Tudor Street, E.C. 4. The subject will be introduced by Mr. E. H. C. Wethered, of Bristol, after which the discussion will be open. No tickets are necessary.

The report of the Housing and Town Planning Committee of the Edinburgh Town Council on the Georgie Estate recommends a flat rate of twenty houses per acre. Plans have been prepared by the city architect. A number of letters are reported as received from proprietors of land in the suburbs offering ground suitable for housing schemes, which have been remitted for further inquiry. The Committee have decided to ask for authority to proceed with the Granton town-planning scheme.

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THE ARCHITECT
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The Adelphi and the Air Board.*

WE are glad that the London Society has held a meeting to protest against the proposal to acquire the Adelphi to provide further accommodation for the Air Board. No buildings that we know of could be less appropriate for purposes of a great public department, and few quarters of London are so intimately associated with historical memories as the Adelphi, which formed the greatest undertaking of the Brothers Adam. The use of buildings for purposes for which they were never intended usually involves partial reconstruction and alterations which all would deplore in the quiet collection of eighteenth century houses which all lovers of London delight in.

The district now known as the Adelphi was formerly occupied by Durham House, which was the seat of Anthony Bek, Bishop of Durham in the reign of Edward I. It was afterwards acquired by Henry VIII. in exchange, it is said, for other property, but was restored to Bishop Tunstall on the accession of Mary. Here Sir Walter Raleigh lived from 1583 to 1603, when he was given notice to leave so peremptorily that he complained to the Lord Chief Justice and Lord Keeper of the Great Seal "that if the King's Majestye had recovered this house, or the like from the meanest gentleman and sarvaant hee had in Inglande, that his Majestye would have given six moneths' tyme for the avoidance, and I did not know but the poorest artificer in London hath a quarter's warning given by his landlord." But in spite of his remonstrance Sir Walter was ejected and the house handed back to the Bishop of Durham.

Subsequently a portion of the site was converted by Robert Lord Salisbury into the building known as the New Exchange for 150 years from the date of its erection in 1606 till its demolition in 1737. This famous place of meeting consisted of four separate parts, the Outward Walk below stairs, the Inner Walk below stairs, the Outward Walk above stairs and the Inner Walk above stairs. The two great galleries, it is said, were decorated especially outside with much carving and sculpture, while inside were rows of shops for the sale of all manner of goods for milliners, seamstresses who furnish dresses; it was a great place of resort and trade for the nobility and gentry. The building of the "New Burse," as it was called, aroused much opposition, especially in the City, as the shopkeepers of the Royal Exchange considered its rivalry would prejudice their interests; but the opposition was unavailing.

But the property had fallen into decay when the Brothers Adam acquired a 99 years' lease from the Duke of St. Albans, dating from 1768. The Duke who, it is stated, was in 1770 confined for debt in Brussels, was glad to obtain £1,200 a year for the property. The architects effected a marvellous change by allowing the wharves to remain, and throwing a series of arches over the sloping site they "connected the river with the Strand by a spacious archway, and over these extensive vaultings erected a series of well built streets, a noble terrace towards the river, and a house with a convenient suite of rooms for the then recently established Society of Arts." In order to embank the river it was necessary to obtain a special Act of Parliament which was finally passed after much opposition from the City, who considered their rights infringed. The Brothers Adam were forced by financial difficulties to raise heavy mortgages on the buildings, and in order to save the situation obtained an Act of Parliament in 1773 permitting them to "dispose of several houses and buildings in the parishes of St. Martin-in-the-Fields and St. Mary-le-Bow and other effects by way of chance, in such manner as may be most for the benefit of themselves and their creditors." In the lottery which they instituted, 4,370 tickets were issued at £50 apiece, representing £218,500 in all. The prizes given were 108 in number, ranging from one of £50,000 to 100 of sums ranging from £100 to £750. The drawer of the first ticket was entitled to £5,000, and that of the last £25,090. Some of the would-be investors wished to have information as to whether the unfinished houses would be satisfactorily completed, but the result proved that the Brothers had accurately gauged the wants of their public and had secured their confidence. We are told from a contemporary document, "The principal houses in the Adelphi possess not only a superior degree of convenience in water laid in, from the top to the bottom of each house, but the whole buildings have also an additional safety against fire much beyond any other houses in London. For besides the use of fire engines, which they have in common with other houses, there is a water tower erected by the Messrs. Adam, which communicates with the river Thames; and the pipes are so constructed that upon a minute's notice three engines, constantly supplied with water, can be played upon any house in the buildings." With these varied attractions it is not to be wondered at that the Adelphi should become a popular neighbourhood, and though we value it for other reasons than the "most modern conveniences" everyone would regret its being handed over to a Government Department in the penultimate stage of the war.

The last of the great houses which adjoined the Adelphi and faced on the Strand was Northumberland House, the sole survivor of the range of noblemen's houses which once stood along the Strand. It was demolished in 1874 to afford room for Northumberland Avenue, after a long resistance on the part of the Duke. The property was acquired in 1873 for £500,000, and the materials, which were sold by auction, only realised £6,500; the great staircase was bought for £360 and removed to 49 Prince's Gate. When we compare drawings of the front of this fine old house and consider that it occupied a portion of the Strand until within the last fifty years, we are forced to the conclusion that many of our modern improvements have been effected at the great loss of the architectural beauty of our towns. We hope that in the coming fifty years we may both preserve what is architecturally and historically interesting in our midst, like the Adelphi, and that our newer streets may have an interest and fitness which has been denied in the sterile period of the last fifty or sixty years. It may be that we have learnt better how to design individual buildings, but we have much to do before we acquire the quiet sense of dignity and harmony which make the buildings of whole districts like the Adelphi and of Fitzroy Square pleasant places to look on and be in. To give back what we have destroyed and defaced in the past is impossible, but we may, if Fate is kind, leave to future generations a monumental bridge at Charing Cross with an approach from Trafalgar Square.

* "The Literary History of the Adelphi and its Neighbourhood." By Austin Brereton. (London: T. Fisher Unwin.)

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Illustrations.

WAR MEMORIAL CHURCH, BASILDON, BERKSHIRE.
ALL SAINTS' CHURCH, BASINGSTOKE.

Notes and Comments.

The City Companies and the Crafts.

We give elsewhere an interesting account of a meeting held at Carpenters' Hall to widen the support given to the Trades' Training School of the Carpenters' Company. The Lord Mayor, in a speech at Carpenters' Hall last year expressed his earnest hope that the Companies would take a more active share in promoting the industries of the various crafts with which they are historically associated, and at a meeting held at Stationers' Hall last December Dr. Addison addressed members of the Companies on the same subject, and found, as is usual, that the Companies who have done so much in the past were equally willing to shoulder new burdens in the present. It should not be forgotten that the trust incomes of all the Companies are strictly devoted to the original purposes for which they have been left, and that where such objects have—through changed conditions—become obsolete the money left in the past is practically spent on lines laid down by the Charity Commissioners and the Board of Education. But outside these trust funds the Companies are expending the greater part of their incomes on public objects, absolutely untinged by any suggestion of prejudice or favouritism. They act, in fact, like a State Department maintained without expense to the people, while livery fines would in very many cases cover the cost of the hospitality they dispense which all—even the critics—enjoy. Their position and merits would be better realised if, like some more modern institutions, they indulged in the art of self-advertisement, but those who investigate facts with *à priori* ideas about the efficacy of ancient institutions usually come away with feelings of wonder that bodies who do so much good have so little desire to proclaim it from the house tops. We venture to predict that the City Companies will, within ten years of the conclusion of the war, hold a stronger position than they have done since the fourteenth century.

The Garden Cities and Town Planning Association.

The Garden Cities and Town Planning Association have issued a carefully drafted memorandum for the consideration of the local authorities who are to be represented at the Greater London Conference on October 30. They suggest, as a result of what is described as being a conservative estimate, that 120,000 small dwellings will be required for the people of Greater London, in addition to 25,000 larger houses which may be built by private enterprise. They do not suggest that these figures should be taken as more than showing the magnitude of the problem to be dealt with, but urge that the County Council, together with other local authorities, should institute an inquiry to ascertain what the actual needs amount to. On the assumption of the 145,000 dwellings it is calculated that there is need for a belt of building of three-quarters of a mile in breadth at a distance of ten miles from the centre, this calculation including allowances for churches, open areas, and public buildings. It is argued, and we think reasonably, that such a mass of new building should not be planted down in a haphazard manner, but requires careful and suitable planning, and we are also quite at one with the authors of the memorandum in generally supporting the formation of new centres on garden cities lines rather than combining agglomerations of buildings round large cities. The memorandum also urges the necessity and wisdom of treating London as a single unit, and not a number of scattered ones. We are quite in agreement with the authors of the memorandum as to the wisdom of obtaining well thought-out surveys and plans and in checking haphazard building. We also believe that the County Council is the best body to make the inquiry suggested, but we very much doubt whether 145,000 houses are required, and entirely doubt the statement that private enterprise cannot be counted on to make good deficiencies.

Monumental Brasses.

In view of the suitability of monumental brasses as one means of meeting the extensive demands for memorials which have arisen out of the war, a selection of rubbings of well known English brasses from the museum collections has been arranged in Room 135 (top floor) of the Victoria and Albert Museum. The rubbings have been classified under the headings military, ecclesiastical, civil and other costume, and illustrate the development of this form of memorial in England from the thirteenth century onwards. A few from modern brasses are also shown, including examples from a series now in process of erection upon an "Eleanor" cross at Sledmere, Yorks, in memory of officers and men from that village who have fallen during the war. It is hoped that this exhibition may give an impetus towards reviving the use of a form of memorial which is at once distinctly English in character and admirably suited for the purpose in view.

Art and Industry.

The Board of Trade, in conjunction with the Board of Education, and with the advice of representative members of the Royal Society of Arts, the Arts and Crafts Exhibition Society, the Art Workers Guild, the Design and Industries Association, and other bodies, have formulated a scheme for the establishment of a British Institute of Industrial Art which it is hoped will raise the standard of British design and workmanship, and will stimulate the demand for what is excellent in quality. The Institute is to be incorporated under the joint auspices of the two Departments mentioned, and it is proposed to include (*a*) a permanent exhibition in London of modern British works of high standard, and (*b*) a selling agency attached to the exhibition. (*c*) A purchase fund to enable the State to acquire work of outstanding merit exhibited, (*d*) the establishment of machinery for bringing designers and art workers in touch with manufacturers, and (*e*) the organisation of provincial and travelling exhibitions similar to the above. An independent Selection Committee is to be formed of people of outstanding reputation in design and craftsmanship, without whose approval no work will be eligible for exhibition, and it is suggested that there will be two sections of the exhibition for articles of craftsmanship and trade products respectively. This, like other schemes, sounds well on paper, and we hope, if put into execution, it will prove equally satisfactory.

Red Tape and Outside Talent.

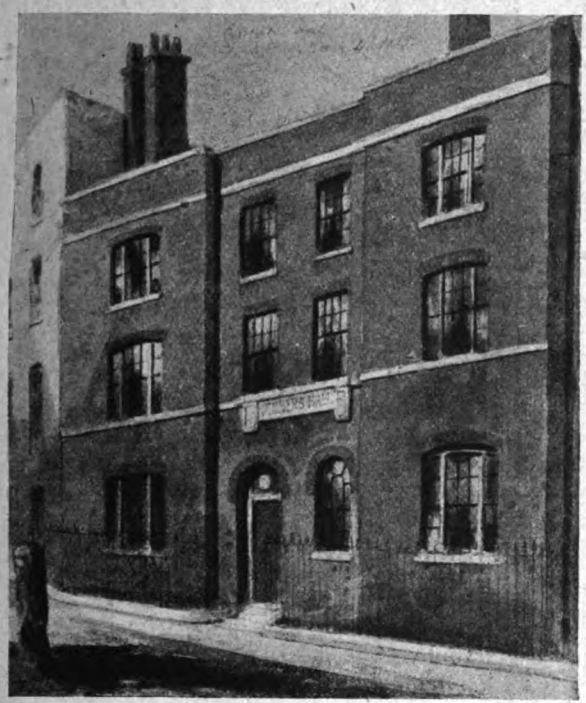
Some of the departmental machinery set up for dealing with the problems of the war has undoubtedly worked well, but it is important to bear in mind that most of the administrative offices have had the assistance of business men of experience and capacity, who have been able to devise methods which have been responsible for the success achieved. With the coming of peace there will be a quick voluntary combing out of such men, and we shall once more arrive at the normal bedrock of red tape. This is an additional reason, if any be needed, for restricting the sphere of activity of our officials when peace comes. A frequent cause of waste and inefficiency is the tendency in Government offices to employ a greater staff than the work to be done warrants, to do away with the feeling of responsibility by a system of delegation and form, to pay men insufficiently, and lastly to underwork them. Short hours, unnecessary forms, and a routine of red tape can be counted on to deteriorate the working capacity of anyone, and this may be defined as being the essence of our departmental organisation. The best work will always be produced by the smallest number of men who can efficiently deal with it, who are allowed full responsibility, and that is the antithesis of departmental control and the reason why the departments scarcely get the services of the best men.

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NOTES ON THE DEMOLISHED HALLS OF THE CITY COMPANIES.—NO. II.

Pinners', Masons', Plumbers' and Joiners' Halls.

The *Pinners* after a separate existence were united to the Girdlers, but received a Charter of incorporation as an independent body in 1636. After a comparatively brief period of prosperity they became extinct. They formerly



PINNERS' HALL.—FROM A DRAWING IN THE CRACE COLLECTION.

had a Hall off Broad Street, approached by an alley still known as Pinner's Court. The Hall which is shown by Shepherd as a plain brick building was demolished, and offices built upon the site.

The *Masons*.—The Masons, who were incorporated in 1677, and possessed a Hall before the Fire of London.



MASONS' HALL DOORWAY.—FROM A DRAWING IN THE CRACE COLLECTION.

Subsequently a Hall was built on the site on which Masons' Hall Tavern now stands, off Basinghall Street. The Hall was sold in 1865, but Shepherd made a drawing of the doorway.

The *Plumbers*, who were incorporated in 1611, formerly had a Hall in Bush Lane, which now forms part

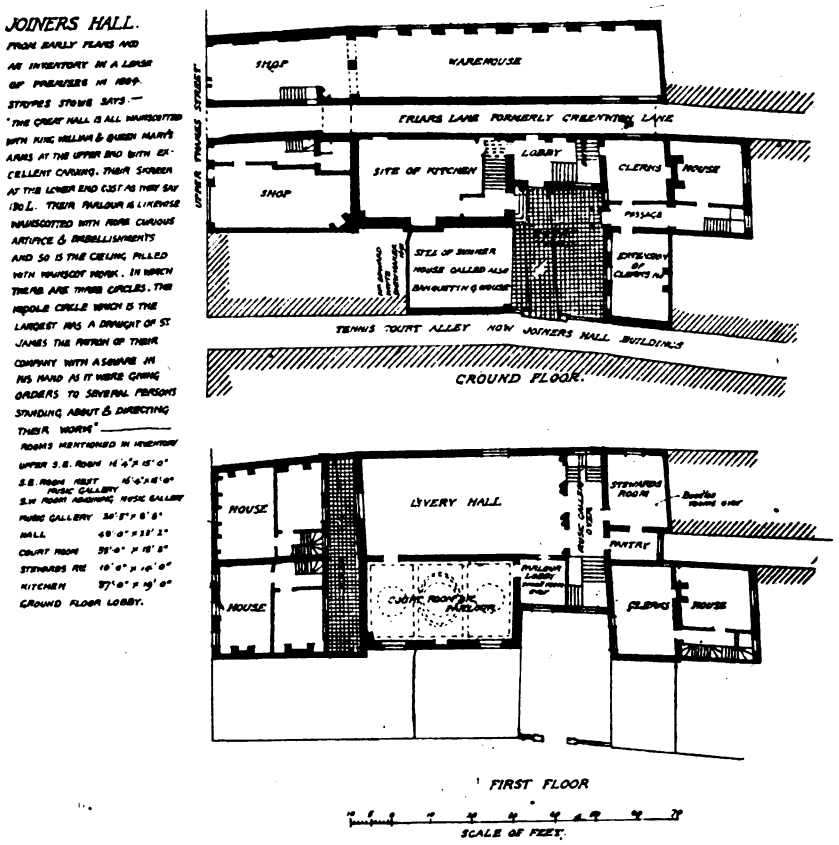


PLUMBERS' HALL.—FROM A DRAWING IN THE CRACE COLLECTION.

of the site of Cannon Street Station. Shepherd made a drawing of it, which shows it to have been simply and pleasingly designed.



JOINERS' HALL GATEWAY.—FROM A DRAWING IN THE CRACE COLLECTION.



The *Joiners* were incorporated in 1670, and possessed a Hall of unusual interest and character. It was built with a courtyard opening on Tennis Court Alley, now Joiners' Hall Building, the Livery Hall extending over the adjoining Friars' Lane on the first floor, while shops forming part of the Company's property faced Upper Thames Street. The Livery Hall was wainscoted and had a fine screen, which was described as being elaborate and costly, while the Court Room ceiling was wainscoted and enriched with carving. Many other rooms are mentioned in the Company's minute books. The buildings, after suffering from fires and other causes, were finally leased in 1804 for commercial uses and finally demolished to make room for a warehouse building. Plans have been discovered in the archives of the Company which make the main arrangements plain, and the very quaint doorway still exists and forms an entrance to the warehouse in rear.

THE WISDOM OF RETICENCE.

I remember an old story—so old, indeed, that it may perhaps be reincarnated with impunity—which referred to the case of a visitor who took part in some solemn and dignified banquet, and who, in outward appearance, at least conformed to the general high tone of that assembly. After contending with various complicated items of the menu in silence, our humble friend was at last betrayed by the arrival of a dish of familiar and homely baked potatoes. "Them's the jokers for me," he said. The point of this parable is that reticence, which, like the silence of the parrot, may be the mask of a thoughtful disposition, may also present a very effectual screen to ignorance. A man may be silent because he has too much to say or because he has nothing to say. In the latter case the wisdom of reticence is obvious.

In these days reticence in building is often praised. We commend some design for a building as "restrained." But it may be doubted in many cases whether the designer has anything to restrain, and whether this view of his work as representing a noble refraining from the expression of the brilliant ideas with which his mind teems may not be more charitable than true.

The old builders were seldom reticent. They laughed, they sang, and cracked their jokes, in stone or timber, with a sort of careless freedom. Building was to them a language, a common speech, which they used freely and spontaneously. And behold! practically everything they said or did was good.

No such happy freedom does the modern architect enjoy. The wisdom of reticence on his part is obvious. I may recall, as an instance of what I mean, the case of an old town in Surrey where, in the midst of a street composed mainly of delightfully expressive old houses, a modern example of the earlier manner of Norman Shaw presents itself. It was duly enriched with carving and ornament, designed with brilliant enthusiasm, but executed with the lifeless and mechanical precision of the modern workman. And so, despite the distinguished designer, it was glaringly out of place amidst the genuine old work with which it was surrounded.

It is easy now to see the main error of the Victorian revivalists. They forgot the craftsman. In the same town is a frontage in the later austere manner of Mr. Lutyens. I am not sure whether it is actually the work of that architect, but can only say that if it is not, it ought to be. This building holds its own well beside the old work because it has learnt the virtue of silence in such company. Had any piece of modern expression in craftsmanship been added—a carved barge board, let us say—the lack of virtue in modern craftsmanship would have at once stood revealed. In a recent visit to an old Wiltshire town as yet almost unspoiled by modern building, I came across some beautiful old almshouses with a porch in which all the features of Classic architecture were made the sport of the old English craftsman. As a grammatical statement it was hopelessly wrong, but as a spontaneous and vital work of art it was a thing to thank the gods for. Strange it is how these old builders could "take their ease in Zion." They seem to have been granted the freedom of that city, and they could do no wrong there even if they tried. The modern architect might be so moved by the beauty of such a porch as this that he would unwisely resolve to measure it carefully and "reproduce" it when occasion arose. And having done so, he might learn perhaps from the disappointing result not to do it again. That would be if he is wise enough to learn from his errors, and not like Mrs. Tullim's gold fish, who, in circling their glass prison, have learnt to avoid hitting the glass. What is the conclusion of the whole matter? For the time being the supreme virtue of the architect must be reticence until he gets a medium for expression in living craftsmanship. And how is that to be obtained? Obviously

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we must begin at the beginning. To the men who build with their hands must be given again their old skill. I believe this can only be done, since building is necessarily the expression of the social state, by far-reaching changes in our present social system. Good building can never result as the natural and normal expression of the community under a capital and labour system in which labour is used mainly for the purposes of producing profits. It can only be produced, as it was in the middle ages, by the association of workers in some modern equivalent of the old Trades Gilds. It was these associations which lay at the root of all the glorious flower and fruit which the old world produced in the building world. It is true the virtue of the tradition outlived these institutions and still finds expression in later periods. But it was the spirit of the old Gilds which inspired all the beauty of our old building, all the same. Modern building in all its hideous depravity is but the outward symptom of the disease of our social state which expresses itself in other forms in labour unrest and strikes. For the truth is that our democracy is at present mainly camouflage. Political government only touches the worker at points. It is outside his real world, which is a world of industry in which autocracy still reigns supreme. Until this state within the State is democratised no good building can be normally produced. And until that happens our supreme virtue must be reticence.

M. H. Baillie-Scott.

THINK!

Who was the Doctor Johnson of his age who set this pregnant word, the valiant soldier's own motto, under the statue of Sir Thomas of Erpingham on the Erpingham gateway in the ancient city of Norwich? "Clear your mind of cant" is but the eighteenth century expansion of this adjuration to the hard-headed weavers, and little heed has been taken of the warning. "If you don't think now you never will think" was the phrase dinned into the ears of his Sixth by a wise schoolmaster, and in some cases at least the seed fell on good ground.

Most little children think; they have to. The world is so full of surprises, of apparent contradictions, that only hard thinking can find a way out. That way may be wrong, but at least it is the fruit of honest mental effort. Later in life thought is squeezed out; things are taken for granted, opinions swallowed without digestion, rash judgments based on insufficient evidence. Mentally we are lazy, slovenly, illogical, hating the trouble of thinking, preferring cant to clearness.

Looking at the future of England, at the immense problems of reconstruction, trade, social changes, relations between Dominions, Colonies, and the Crown, have we any confidence that thought, "fundamental brainwork" in Rossetti's phrase, will be applied at all? We English have a love of catchwords; we are governed by phrases and party cries: nominalism, not realism, dominates our politics. We commit ourselves to far-reaching changes without thinking what those changes imply; and then we cry out upon our rulers, and clamour not for a change of outlook, but for another set of formulæ. Once King Log is displaced, Kings Stork I, II and III follow in his train, and then we wonder why none of them is satisfactory.

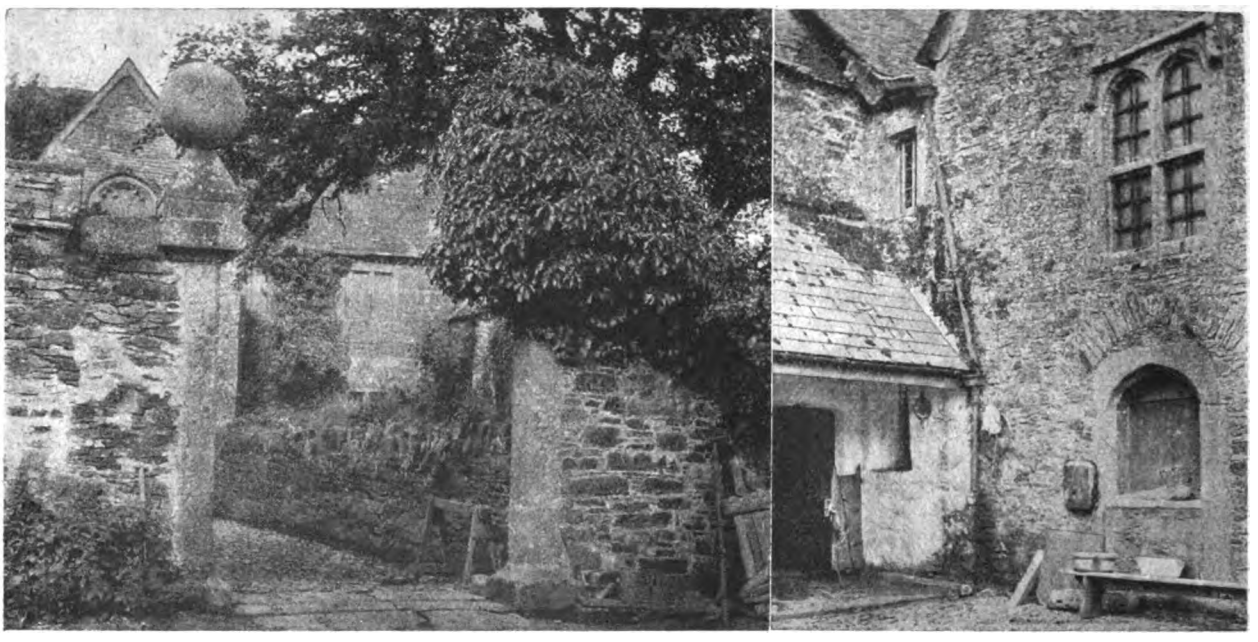
Our sober politicians pointed to revolutionary France as the home of party cries: Liberté, Egalité, Fraternité set the pace, and we, entrenched at home behind the comfortable Whig belief in the greatness of the British Constitution, sat by and pitied France. With Cobden's Peace, Retrenchment and Reform the case is altered, and the modern party shibboleth begins. Without French logic, without French clarity of thought, we set to work. Southey, with prophetic dread of an urban proletariate, ventures to protest against the factory system; Macaulay denounces him in the name of Progress, that is, of machinery, villadom, and the Reform Bill; now we see that Southey was right. The drifting of the best of our agricultural population into the towns has long been a serious menace, recognised at last by the Small Holdings movement, by colossal rural housing schemes, by the proposed settlement of our soldiers on the land, by the offered bribe of three acres and a cow to every Irish volunteer under the new scheme. But the warning comes to us, Think! We are told by a singularly observant and sympathetic writer on rural life* that a question was set in a village school in a purely agricultural district in Wiltshire before the war, "What do you want to be when you are grown up?" Not one boy wanted to go upon the land, though none had any experience of any other life. How are you going to reconcile this antipathy of country-bred boys to the country with a future "on the land?" It may be possible to do it, but thought, not theory must show the way. Mill's "greatest happiness of the greatest number" is a noble ambition, nobly expressed; try to apply it in detail and see what you come to. Free schools, free food, free tram-tickets, free medical treatment: up to a point, well and good. But if you kill off the few whose labour provides these luxuries for the many, where are you? And ultimately, where is the happiness of the greatest number? Kingsley's parable of the great and glorious nation of the Do-as-you-like has an application outside the pages of a fairy tale. When everything is provided, effort ceases; the cessation of effort ceases to provide everything; and in process of time man is an ape again, doing everything for and by himself until a stronger comes upon him and the last of his race goes down before a man.

Think! Clear your mind of cant. These are the gospels of the Knight of Norwich in the fourteenth century, of the most honoured Doctor in our history in the eighteenth. Even so, "Remember!" echoes from the scaffold of Whitehall, a warning to a country torn by civil war and a royal race which, like the Bourbons, their kin, learned nothing if, unlike them, they forgot much. Mistakes in social history are not passed over, any more than in the Navy or in Nature herself. Acts, words, have consequences little thought of for the country at large, for a period, for posterity; and yet we act and speak as if they had none beyond our own immediate circle. We address a meeting; a half-truth is seized upon, and swells to something immeasurably greater than the whole. The phrase is Hesiod's, remember, the phrase that is of a man soured and broken by contact with a hard and bitter lot on the land; the experience of 3,000 years has not lessened its truth.

The issues of life for ourselves, for England, for the world itself hang upon our decisions as a nation in the next two years. For good or evil, it is ours to lay the foundations of a better world or to reduce to chaos the ruins of the old. It is not sentiment that will help us now; it is not class warfare that can bring about fulfilment in place of destruction. Yet how may government for the best, by the best, be won? How may true Reconstruction (not the Ministry's) be brought about? By thought, by clear vision, and by nothing else. "Think!" that is the message of the ancient city of Norwich to her children, to the world, and if Boswell had earned no other laurels he would have won a place with the Immortals by recording Dr. Johnson's saying as to cant. The Doctor was before all an Englishman, in many ways *the* Englishman; but unlike our race he had the gift of vision, of inexorable logic, of looking at facts before, behind and upon either side. And it is the glory of his age that its noblest minds knew him for what he was, recorded his sayings with unfailing enthusiasm, and submitted not once, but as often as they could get near him, to the Socratic processes by which he opened their eyes to disagreeable truths, made them think as they had never thought before, and helped them to do for themselves what no one could do for them, clear their minds of cant. Are we to fall behind our ancestors for want of a prophet to prophesy evil? Are we, like Ahab, so in love with the prophets who prophesy smoothly that we will not hear the other side or bear to be told of our own weaknesses?

* "A Modern Boeotia," by Deborah Primrose.

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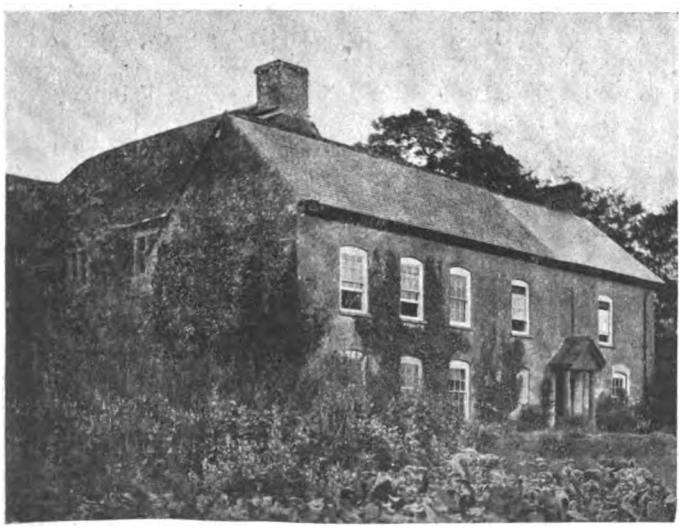


HAYES BARTON.—THE COURTYARD.

THE RALEIGH HOME.

Were we not at war popular pilgrimages no doubt would be made to places connected with that great Englishman, Sir Walter Raleigh, the tercentenary of whose unmerited execution we are now celebrating soberly and quietly—to Hayes Barton, that modest farmhouse in East Devon, where he was born; to the many places in which he surprised his servant by smoking his pipe, the first in England of tradition; and to West Horsley, in Surrey, where his head is supposed to lie in the vault of the church. There is one interesting old house, Fardel Barton, in South Devon, connected with the family, of which little is heard although it was the home of Raleigh's forebears for more than two hundred years and was sold by Carew, Sir Walter's half-brother, early in the seventeenth century. Being off the beaten track and approached by a private road it attracts little attention, although outwardly at least it remains pretty much as it was in Sir Walter's time, although he never lived there—though doubtless he visited his half-brother—as his father left Fardel, apparently because the family fortune had received a set back, before he was born and does not seem to have returned.

It is now a farm and the old front, with its projecting porch and mullioned windows, faces the farmyard, flanked on one side by the chapel and the range of stables which seem nearly as old. The interior has been much altered, but the kitchen can have changed but little, and the back entrance gives an impression of being the oldest part. A new wing was added many years ago and now forms the main front, but it cannot be called attractive. The chapel, licensed in August 1422, was long used as a cider cellar, but was cleaned out in 1902 by Mr. Spode, whose family have owned the place for about a hundred years, in memory of Augusta Boevey Pode, who had long desired to see this done.



THE NEW FRONT, HAYES BARTON

CORRESPONDENCE.

To the Editor of The Architect.

Reconstruction.

Sir,—Your article in "The Architect" of the 18th inst. drawing attention to possible developments due to the use of electricity is on the right lines, but "Custom dies hard."

Even to-day electricity is in its infancy in this country, and the scientific and artistic developments that are possible by its aid are very great.

The Italians are carrying out in North Italy a great scheme successfully and cheaply by conserving and utilising the water power from the Alps and Apennines in a somewhat similar way to which the Americans are utilising for the generation of electricity the water power of Niagara Falls.

In this country coal will doubtless continue for many years to be used for producing most of our electricity, so that the current may not be quite so cheap here as it is in Italy or America. It will, however, in the near future be possible to supply electric current throughout this country at a very low and economical cost for power, heating, lighting and cooking, and also by its aid hot water can be supplied at a cheap rate to dwellings, the water being heated by waste steam at the power stations and conveyed in suitable conduits.

In this connection the present developments in Manchester, Glasgow and some cities in America might, with advantage, be considered. In Glasgow electric current was supplied before the war for heating and cooking in dwelling houses at $\frac{3}{4}d.$ per unit, and in some cities in America at $\frac{1}{2}d.$ per unit. At no distant date after the war it will probably be possible to supply electric current at a lower rate than $\frac{1}{2}d.$ per unit throughout England. This would make the possibility of an electrified workman's cottage a reality in this country.

With the inauguration of Peace conditions, I suggest that a great Electrical Exhibition might be held in London that would demonstrate to the public the power that has been largely instrumental in winning the war, and which must be developed during the twentieth century in order to retain the position of Britain in the markets of the world. In this connection it should be remembered that our prosperity during the nineteenth century was largely due to the developments that were produced by the power of steam and which are now being supplanted by new developments due to electricity.—Yours, &c.,

John Murray, F.R.I.B.A.

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Monthly Review of the Building Industry and its Crafts.

Some Notes on a Contractor's Difficulties.

During recent years their name is legion, and one hardly knows where to begin. They range from the difficulty, loss of time and temper, delay and expense, of obtaining a permit to use a spring value about 15s. in stock and needed for a repair job (but which the merchant dare not sell until a priority certificate is obtained), to the difficulty of retaining the services of such remnants of his workmen and staff men as still remain to him, in the face of the superior protection from the call to military service afforded in certain other industries to building trade men on their maintenance and repair staffs.

Some of the difficulties will pass with the passing of the War, but some will probably continue for an indefinite period thereafter, and may modify previous methods and practice of carrying on the building industry to some considerable extent. Already great changes have taken place, and some of them appear to have elements of permanence about them. It is proposed in these notes to touch upon some of those difficulties and changes, and try to see, if possible, in what direction they will tend to alter pre-War practice.

In pre-War days the seeking for contracts by contractors, the inviting of tenders by architects, the settling of conditions of contract, formed a part of the regular routine of the building industry, which proceeded on more or less definite and stereotyped lines.

The whole of that has, for the time being, gone by the board; contracting is now a very different thing. Rarely is a contract let for a lump sum, but even then there have to be provisions for dealing with increases of wages due to award or agreement, so that the contract is no longer a lump sum contract in the sense in which that term was understood prior to the War; more generally a contract is let on a percentage on cost basis, or for a fixed fee with a bonus on savings effected, whether of time or cost.

The causes of such changes in practice are not far to seek. Labour has become so scarce, and the cost of living continually rises so quickly, that wages rates are changing every three or four months. Under such conditions a rigid lump sum contract becomes so speculative that it is more and more difficult to induce contractors to take it without provisions which profoundly modify the principle of a lump-sum contract. Similar difficulties exist in regard to materials, contractors being unable to obtain firm quotations upon which to base their bids; therefore provisions have to be introduced in any lump-sum contract providing for changes in cost of materials, or unforeseen difficulties in obtaining deliveries due to War conditions, which still further alters the nature of a lump-sum contract as generally understood.

It does not need much foresight to realise that after the War the scarcity of labour will continue to be serious in the building industry, that the cost of materials will fluctuate greatly for a long period, that the demand for building and constructional works will be phenomenally large, and that for some years to come it will be no easier to carry out a building contract than it is now. By that time the new methods and conditions of contracting will have probably become so far habitual that they will tend to become a permanent part of our practice.

The position in which Labour now finds itself leads to other consequences. For instance, it has been hitherto quite usual to make provision in the conditions of contract that the architect might require a contractor under certain circumstances to dismiss a workman or workmen from the works; but recent notorious experiences show that in future such a provision must be foregone lest it bring about a deadlock, wherein the contractor and the building owner, both desiring the works to proceed, are prevented from carrying out the obligations they have mutually undertaken under the contract because a dismissal required by the architect has resulted in a strike.

The fall in the purchasing power of the pound sterling, which is reflected in the high wages and high prices prevailing, must similarly affect the ability of contractors to finance their undertakings. The purchasing power of the capital he has invested in his business is less than one-half what it was prior to the War, which means that he must not in future allow money to lie idle in retentions for completed works, or locked up in unsettled balances due for extras.

Already this was a serious grievance prior to the War; it has since become vastly more serious, and doubtless for the future, so long as money remains dear, the former laxity will have to be replaced by some method of prompt settlement such as already prevails in other large industries.

In the peculiar circumstances of the building industry this result can probably only be attained by making greater use of the quantity surveyor's services in keeping the works so far measured up that the retentions prescribed by the conditions of contract are not, as has hitherto too often been the case, exceeded, and by his dealing with all variations as they come along, instead of their being left to accumulate until the end of the contract. Under a well conceived system payments on account should be regularly made on a given date each month, and at each interim certificate the contractor and the client should both know, to a trifle, how they stand financially to one another. The practice in regard to the specification and selection of materials has had perforce to undergo modification owing to War conditions. It is not now a question of what the designer would like to specify, but what the supply available will permit him to use; indeed, what may be available to-day may no longer be so to-morrow, and substitutions of one kind or another must necessarily be resorted to. It will be long ere the market for goods becomes normal again, and the question arises whether the former practice of making the specification the basis of a building scheme should not now be discarded in favour of making the plans and quantities the basis. It is understood that contractors are favourably disposed to such a change, their experience being that descriptions in specifications tend to become so stereotyped that eventually they only represent what the architect thinks ought to be and not what in practice he has to accept as practicable.

The War conditions have brought into prominence the question of output in its relation to unit costs. Gloss the matter over as we may, there are only two methods by which the best effort can be got out of human beings — one is to drive them and the other is to lead them.

The time for the driving method is past. Under present conditions of the labour market that method can no longer be applied. To lead men requires other methods of organising work than some of those which have prevailed in the recent past. Leadership is possible when men are striving to attain a common object; it is not possible when they are seeking divergent objectives, neither is it possible without a certain amount of discipline.

Neither of these conditions can be satisfactorily realised where their efforts are employed in a casual manner, such as has hitherto obtained in the building industry.

The decasualisation of employment in the industry lies at the root of this question, and will be most difficult to bring about, involving, as it must, a radical change of outlook and method for architects, contractors, and workmen, and an amount of co-ordination and co-operation which has not hitherto obtained. Our military experience during the past four years has shown us that to attain the best results the Army must have one object in common, from generalissimo to private, viz., the success of the cause for which it is fighting; there must be discipline in the ranks, leadership with all the care and thoughtfulness for the welfare of those led which that term implies, the best of mechanical appliances of every

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kind, and these worked to their highest power, the most thorough and competent staff work in every department of the military machine, and mutual confidence to back the whole. There are grave difficulties in applying analogous ideas to building enterprises, but it will have to be done in no small measure if the problem of adequate output is to be satisfactorily solved.

THE CONSTRUCTION OF A RESERVOIR.

CONTRACTORS' LARGE CLAIM FOR EXTRA WORK.

At the Surveyors' Institution, Westminster, Mr. G. Midgley Taylor, C.E., as Arbitrator, has just concluded the hearing of a claim for extra work, amounting to about £13,000, by Messrs. William Underwood & Bro., contractors for public works, of Dukinfield, near Manchester, against the Mountain Ash Urban District Council.

Mr. T. Eastham (of Manchester) was counsel for the claimants, while Mr. G. A. Scott (London) appeared for the Urban Council.

The claim had reference to work done in the construction of Penderyn Reservoir, Brecon, for the Urban Council, and the hearing lasted eight days, considerable evidence being given. The claim consisted of a large number of items, and one of the most important was for £3,028 for extra width of concrete which was put into puddle trench, and rendered necessary, it was contended, by irregularities on the sites of the trench. In respect of 1,718 cube yards, 16*s.* per cube yard was claimed; 1,654 yards were put at 19*s.*, 68 yards at 22*s.*, and five yards at 30*s.* For extra width of excavation due to above a sum of £2,874 8*s.* 6*d.* was claimed, the highest rate being 56*s.* per cube yard, and the lowest 11*s.* 6*d.*, the number of yards stated at the latter sum being 1,696. The contractors originally claimed £2,475 10*s.* for 21,223 cube yards of clay taken at an extra cost of 2*s.* 4*d.* per cube yard. It was subsequently discovered, however, that the number of yards of clay taken was 20,461, and a reduction was accordingly made in the claim. There was an item of £1,192 5*s.* for mortar joint in concrete in puddle trench, being 9,538 square yards at 2*s.* 6*d.* For excavations below a certain point, on a claim for £2,935 10*s.* 6*d.*, the Council's engineers (Mr. Wm. Fox, M.Inst.C.E., and Mr. F. W. La Trobe Bateman, M.Inst.C.E., of Westminster) had allowed £2,189 8*s.*, leaving £746 2*s.* 6*d.* in dispute. The claim also included a sum of £85 in respect of the provision and use of eight electric pumps, motors, and gearing, each at 12½ per cent. for one year.

The contract, which amounted to £69,000, included the construction of an approach road, a reservoir on the Tai-cwplan and Trebanog-fach farms, with embankment, puddle trench, discharge pipes, valve shaft, watercourses, roads, footpaths, and boundary wall. The contract also provided for a line of pipes from the Bodwigiad stream to Nant-y-bwllfa stream, thence to the reservoir, with intake weirs and boundary walls: a tank near the Bodwigiad stream, and laying and jointing lines of main pipes from the reservoir to the Darranlas reservoir at Mountain Ash. The site of the reservoir is about two miles from Hirwain Station, on the Great Western Railway. By arrangement with the Urban Council the contractors did not complete the work.

Evidence in support of the claim was given by Mr. Charles Lomax, C.E., of Cross Street, Manchester, who dealt exhaustively with the various items. He said that in respect of the clay taken at extra cost by the contractors, the Council's engineers had allowed, he understood, £273 15*s.* 3*d.* By making that allowance they had admitted that the principle was right, but the amount allowed was, in witness's opinion, quite inadequate. Work given in a supplementary specification should have been given in the original specification so that the contractors should have had an opportunity of pricing it.

Mr. G. A. Brierley, engineer to the contractors, also gave evidence. He said that throughout the work they had a great deal of water to get rid of. If it was spring water it rested with the contractors to make arrangements to get it out at the Council's expense; if it was not spring water the expense did not fall on the Council. Witness, however, declared it was spring water.

Mr. Scott: There is a conflict between the opinion of the Council's engineers and the contractors as to the character of the water to be dealt with.

Mr. Brierley said such was the case. Regarding the embankment he said it was being made according to plan, and the contractors had to produce an embankment of that shape to the satisfaction of the engineers.

Mr. Scott: Why, if the contractors had to do that at a fixed price, did they send in a claim for "finishing off"?

Mr. Brierley: We say it is an omitted item from the quantities.

Mr. Scott: The contract provides that the contractor shall send in every month an account for all the work he has executed for which there is no provision in the schedule. That means that the work executed has to be notified to the engineer so that he can control the expense.

Mr. Brierley: I take it this means within a month of the time when the work was completed. In most of these claims the work is not yet completed.

Mr. Scott said the contract further provided that no claim would be allowed or considered unless made within a month of the time when the work was executed. That, counsel took to mean, was within a month of the time when the work was completed.

Mr. Brierley repeated that in most of the claims the work was not yet completed.

Mr. Scott: Is your reading of this clause that you can begin an extra at the beginning of the trench and wait till the contract is completed, and then send in an account for £1,000 when the whole thing has been covered up?

Mr. Brierley: But in this case they have an opportunity of checking it. There is nothing they cannot check.

Mr. Scott: Some of these claims you sent every month; others you did not produce till right at the end.

Mr. Brierley: Because I was not instructed to send them in.

Mr. Scott: Were you instructed to send in the other claims?

Mr. Brierley: Yes.

On behalf of the Urban Council evidence was given at length by Mr. Trobe Bateman, the engineer, with the object of showing that only a sum of about £700 was due to the contractors.

In the concluding stages of the hearing the claimants withdrew a portion of their claims amounting to nearly £4,000, as this was not included in an account rendered at the time of an agreement between them and the Urban Council, when the latter took over the work from the contractors owing to the death of a partner who was prominently associated with the undertaking, together with the difficulties of war conditions.

Mr. Tonks, inspector on the works, also gave evidence for the Council.

The Arbitrator reserved his award.

Note.—Next month we shall give the first of a series of articles in this *Review* dealing with Law as it affects the contractor and others connected with building operations.

The Malton Rural Council on Saturday considered the recommendation of the Housing Committee to appoint a special committee to select sites and prepare plans for working-class houses, with the assistance of an architect. Mr. Bingley Day, agent to Sir William Worsley, in opposing the employment of an architect, said no one knew what the cost of building would be in three years' time, and an architect's figures would be worth nothing. It was decided to appoint a committee without the services of an architect.

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LABOUR IN THE BUILDING INDUSTRY.

The general attitude as interpreted by the Press on the question of labour after the war appears to be one of fear illuminated by the sunshine of hope—fear that Labour will stand out for impossible conditions, and hope that in the eleventh hour they will be pervaded with a spirit of sweet reason and will settle their differences with Capital in the new Trades Council and live happily ever afterwards in the model dwellings supplied by the authorities at the expense of that patient and long suffering ass, the income-tax payer.

In reality we believe that the course of events is more likely to be this: Labour will make unreasonable demands after the war, and will in many cases stand out for impossible conditions despite the introduction of brand-new machinery for the settlement of differences which may arise. The daily Press, with the best motives, no doubt, but with the very laudable object of smoothing the way in war-time, possibly may wish to say nothing that will prevent the working-man from voting against the political party they represent. We are in a freer position, and therefore may speak our mind without hesitation. Whatever political party is in power economic conditions and not political ones will determine the conditions of employment between Capital and Labour, and the first necessity is that Labour as well as Capital should understand this fundamental fact. A little reflection should convince the most obstinate that State employment cannot be regarded as a panacea for labour troubles. If the State employs labour it must do so because labour creates sufficient wealth in the form of a product to leave a margin in the form of profit. It is true this margin need not be a large one, but it must be sufficient to cover the cost of administrative expenses in the shape of management. If the State did not secure this margin of profit it would rapidly become impoverished, and in the end would be unable to fulfil its function as an employer.

But if, as has been proved in a great number of instances, Governmental expenses in carrying out work are greater than those by the private employer, Labour would be worse off by the substitution of the Government for the private employer, for a greater amount of the wealth produced would have to be spent in management.

It is calculated in this country that the average earnings of capital are about 5 per cent., as against something like 10 per cent. in the United States of America, where, at the same time, the earnings of Labour are from two to three times what they are here with shorter hours of employment. Considering that the selling-price of most commodities is as cheap in the United States as it is here, Labour is very much better off—so much better off that Socialism has practically no hold on the American working-man, who has no great animosity against capitalist or millionaire. This astounding result has been produced very simply, partly by the employment on the part of Capital of the best labour-saving machinery and management that can be devised, but principally by the scrapping by Labour of the antiquated notion that their interests are benefited by diminishing or retarding production. It is proved beyond question in the building trades that the cost of building has advanced out of all proportion to the increase of wages paid, and most of the difference can be put down to the successive and successful attempts of the trades unions to hamper production. If, as Labour often alleges, Capital takes a lion's share of profits, the solution is a simple one—that of undertaking not only its own work, but that of management and control. Our trades unions in most organised trades would be financially able to make the experiment. All of us would be willing to buy boots, books, or erect buildings if these undertakings were carried out directly by responsible labour organisations, for all the average man cares about is obtaining the result. We believe the experiment would do more to settle the points at issue between Labour and Capital than any machinery which could be devised. But directly the war is over Labour will be faced with the old conditions, which are, briefly, these—after wages have been paid and materials bought, there must be a margin for the expenses of control and management, for which the average employer is not paid exorbitantly. But it does not matter to Labour whether one employer makes a profit of a million or a hundred thousand employers doing the same work make profits of £10 each, so long as the million or the £10 represent a reasonable percentage on the amount of capital employed in the business. Nor does it matter to the employer whether the worker makes £2 or £6 a week as long as a certain amount of work is produced at the same cost. In fact, he is better off with the smaller number of employees than the larger, for his factory can be smaller and many incidental expenses lessened. In building especially time is often money, and the earlier completion of buildings means an increase in the earning power of their owners, which also reacts on the wages which are paid.

We very much question if the pessimists who think that building will be enormously increased in cost after the war are correct in their assumptions. There will necessarily be an increase for some time because of the shortage of materials and because of the increased cost of living, but these differences will adjust themselves after a little time. The other factors affecting wages will be governed, as they always have been, by the possibility of building at a profit to the owner. If Labour makes that impossible the great bulk of building will cease, and unless the labour employed in the building trades has other and alternative sources of income, Labour will, after a pause, accept the best terms it can get, whatever party may be in power, nor can any legislation help the worker.

For these reasons we believe that employers in the building trades need not be unduly alarmed, for while difficult times may be ahead, simple economic factors must in the end operate to produce stability. We quite agree with the Minister of Labour that the reactionary employer should be penalised as well as the obstructive workman, for both are a danger to this or any State. Labour as a whole has chances it never had before if it makes use of them rightly; but it cannot do so by injuring the fabric of the community.

THE COLWYN COMMITTEE ON CONTRACTS.

We give below the first report of the Treasury Standing Committee's action with regard to contracts:—

(1) That where, as in the majority of cases, a lump sum contract is no longer practicable, the basis of cost *plus* a fixed profit to the contractor be adopted in lieu of a profit increasing with expenditure.

(2) That as an additional stimulus to the contractor he shall be granted at the discretion of Government a bonus for expedition in construction.

(3) That before the placing of the contract the work contemplated must be set out in approximate detail, with drawings and specifications, to secure that the estimated cost, on which the contractor's remuneration is to be based, is as accurate as possible.

(4) Careful selection of contractors for the larger contracts and, most important of all, close supervision of the work by a competent staff.

(5) Competition for labour among contractors or by Government departments engaged on Government work by the holding out of inducements must be prevented.

(6) The immediate establishment of a Standing Committee to ensure uniformity of procedure.

We do not in the least agree that in a majority of cases a lump sum contract is impracticable. It is not economical, or even expeditious, to build from hastily finished or partially thought-out drawings, and if drawings are complete and thought out, it is always possible, without loss of much time, to obtain lump sum contracts based mainly on quantities, and the time saved in the end by doing work properly more than counterbalances the small amount of time lost at the outset.

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RECONSTRUCTION IN THE BUILDING TRADE.

We give below some suggestions for reconstruction in the building trade from a private source which may be of interest to our readers and suggest thought. Two points occur to us after reading them over, the first being that the word "loss" is carefully eliminated, though we know that many employers suffer losses through reasons which are beyond their control. Any arrangement for profit sharing should, in our opinion, include some provision for the sharing of losses, or at the least a provision that the employer should recoup himself for such losses out of the future profits of a definite and limited period. Clause 10 would be welcomed by most employers who find it advantageous to employ the keen, competent men, but it is probable that the Trades Unions would have a good deal to say on this point. A sliding scale for wages is reasonable, but it is questionable whether it should be based on the cost of any one commodity: it would be better to adjust it as in the coal trade on approximate selling prices. We do not think that either employers or their men would appreciate the amount of Government regulation implied by several of the clauses introduced, and we are quite certain that clauses 11 and 12 would be mischievous, leading as they would to continual interference, nor do we think that most employés have any locus standi for complaints of the obstacles put in their way by employers; the boot is usually on the other foot.

1. Profit sharing between employers and workmen.

2. Profits to be shared in equal parts after a reserve of 10 per cent. has been deducted and retained by the employers.

3. The profit of any one firm or company to be the amount upon which the Inland Revenue office collects income tax.

4. The 45 per cent. of the profit forming the portion to be divided among the workmen to be collected by the Inland Revenue office on behalf of the Government for distribution among the workmen.

5. Every workman who has earned wages in the building trade in the course of any year or part of a year to be entitled to his share of the total labour profit of that particular year.

6. The amount of profit due to any particular workman to be the same percentage on his total wages in that year as the percentage represented by the total amount of the labour profit on the total wages paid in the building trade.

7. The term "wages" to mean all monies paid to a workman whether for the total number of hours worked, or for piece work, or any bonus he may have earned.

8. No workman to receive any percentage out of this labour-profit fund on wages paid to him by any private individual, firm, or public body who does not render an account and pay income and labour profit taxes on the profit made by him or them on such private building work.

9. Every workman to be allowed by his Union to earn as much money as he can, to work on piece work if he likes, and to earn a bonus, provided that his earnings on piece work or on any system of bonus never fall below what he would have earned if paid by time for the same number of hours worked by him.

10. The rate of wages per hour to be permanently fixed, but to be raised automatically each quarter proportionately to any rise which may occur in the price of the 4 lb. loaf. Bread to be the sole standard.

11. The workmen's representatives to have the right of inspecting all buildings in progress and of remonstrating with builders, owners, architects, or any other person on whom the productiveness of the men's labour depends, on obstacles placed in their way either by insufficient or inefficient organisation, lack of adequate plant, delay, mistakes, or any other cause impeding profits.

12. The said representatives shall also have the right of inquiring into the profit of any employer for any one year, and if no profits have been earned, and consequently no contribution made by him to the labour profit fund during one or more years, they are to have the right to give him one year's notice to mend his ways under penalty of being boycotted by the workmen.

13. Every workman to be furnished with a wages card, on which the total wages earned by him during any one year are recorded by the employers.

14. On presenting this card at any branch post office the workman to receive the percentage allocated by the Government.

15. The total wages paid annually by each firm to be stated by each firm on their income tax returns.

16. A small percentage (if necessary) to be allowed to the Government for their trouble in collecting and distributing the labour profit tax.



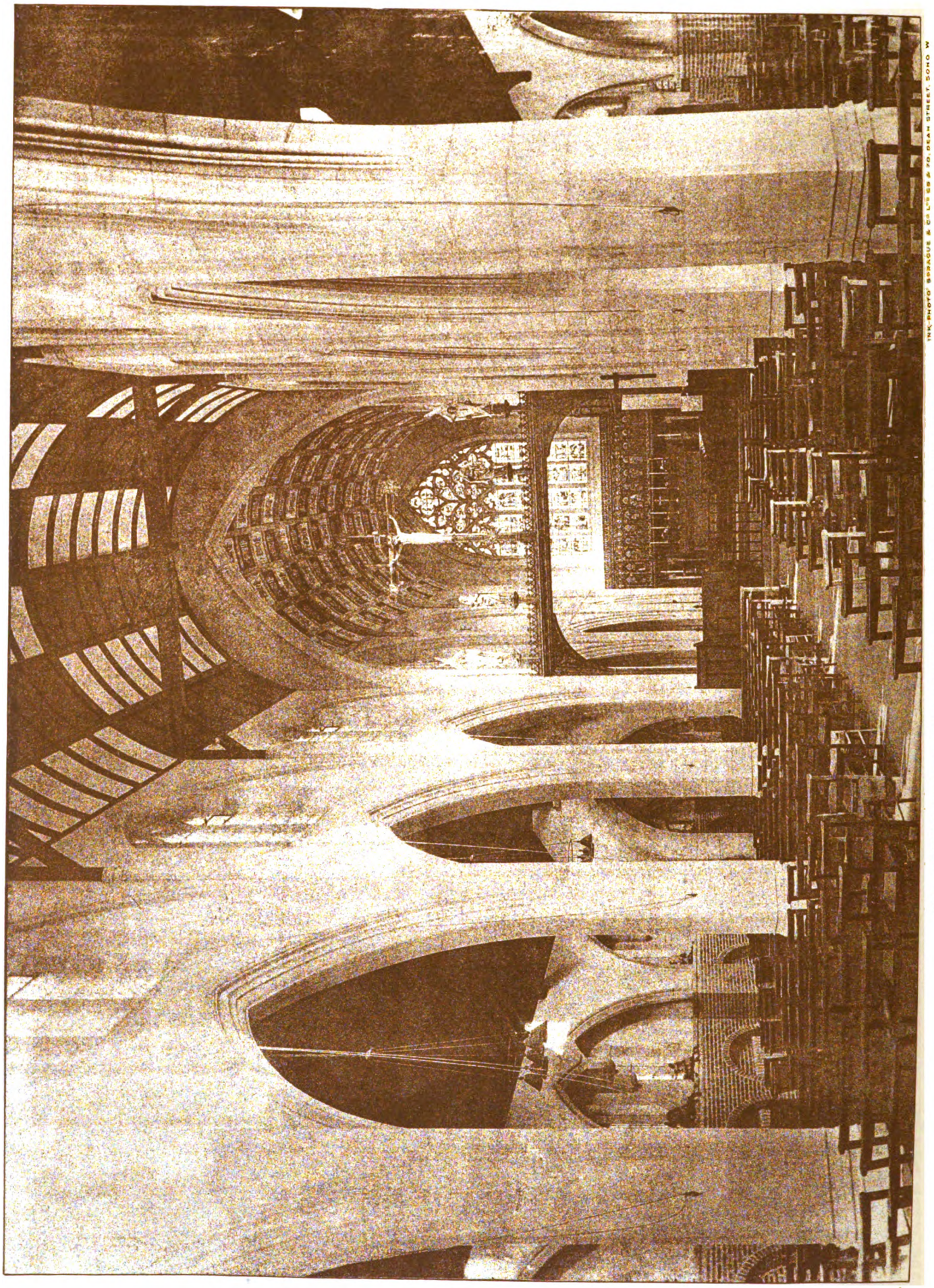


We have a copy of a well-illustrated catalogue giving illustrations of Ornastele Embossed Metal Ceilings, which is issued by the Grovesend Steel Ceiling Co., of 29 Great St. Helens, London, E.C. 3, whose works are at Gorseinon and Pontardulais in South Wales. These ceilings are little used in this country at present, but they are in immense request abroad, both in parts of the Continent of Europe, and still more largely in the Spanish-speaking districts of South America, and in tropical lands. The advantage of having a carefully-designed ceiling covering which can be described as being everlasting is very great where conditions of heat and humidity render the use of ordinary plaster difficult, and where there is often a difficulty, if not impossibility, of securing skilled craft workmen. The book before us contains 160 pages, filled with carefully photographed illustrations, most of which are to scale, and the whole of the descriptive matter is given in English, French, Italian, Spanish, and Portuguese. At present goods can only be supplied in cases where a permit is obtained permitting the use of steel, but the firm are ready directly war conditions are relaxed to deal with a large business with promptness and expedition. The book contains not only ceilings and cornices, but friezes, dados and other architectural adjuncts which the architect and others can adapt to the general lines of his design. As is fitting, full and exact descriptions are given of methods of measurement and fixing, and, with the data afforded, orders could be readily given by telegraphic means when time is short. We can thoroughly recommend the work of this firm as being absolutely the best of its kind. The Grovesend Steel Ceiling Company also issue a "Home Edition."



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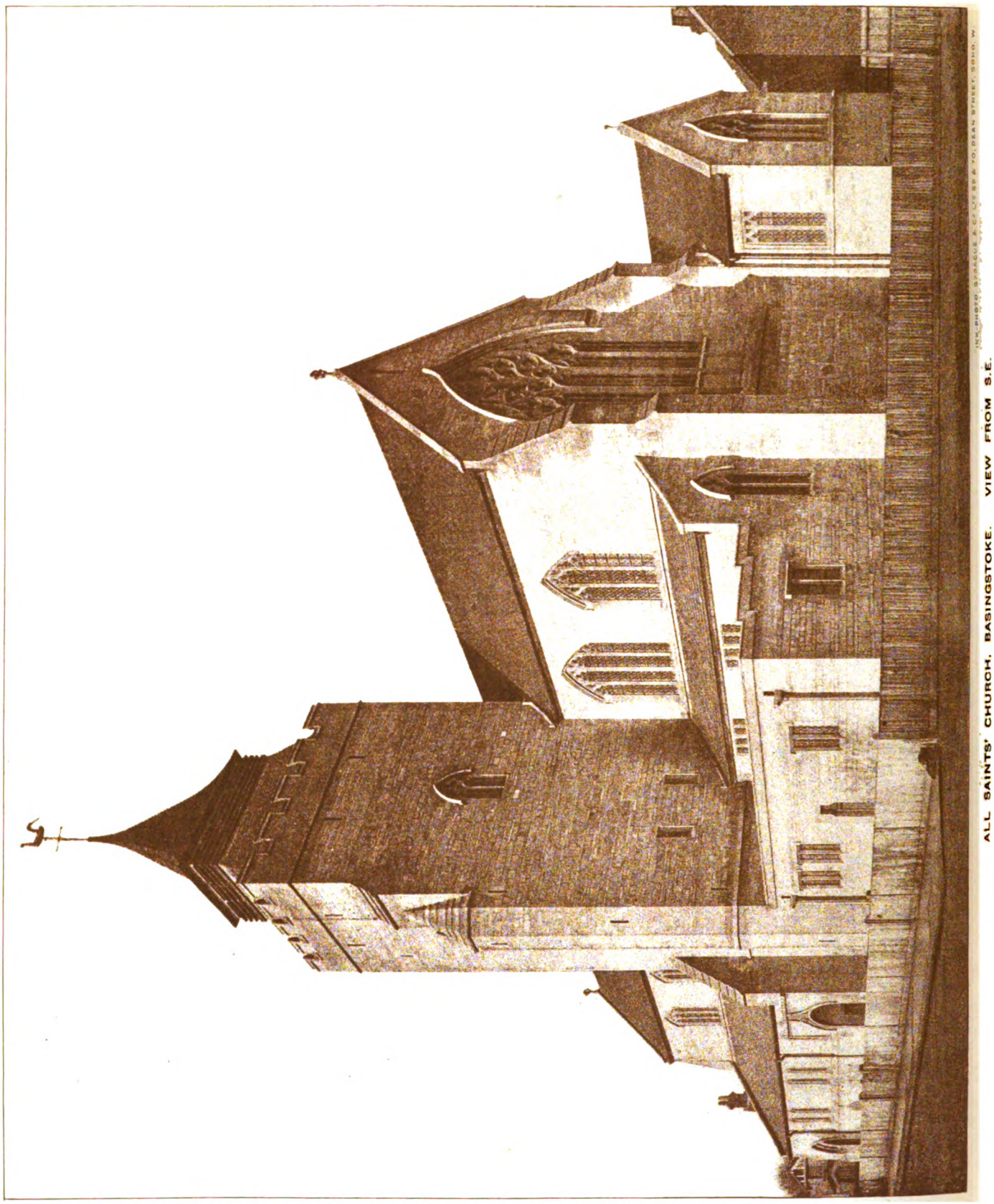


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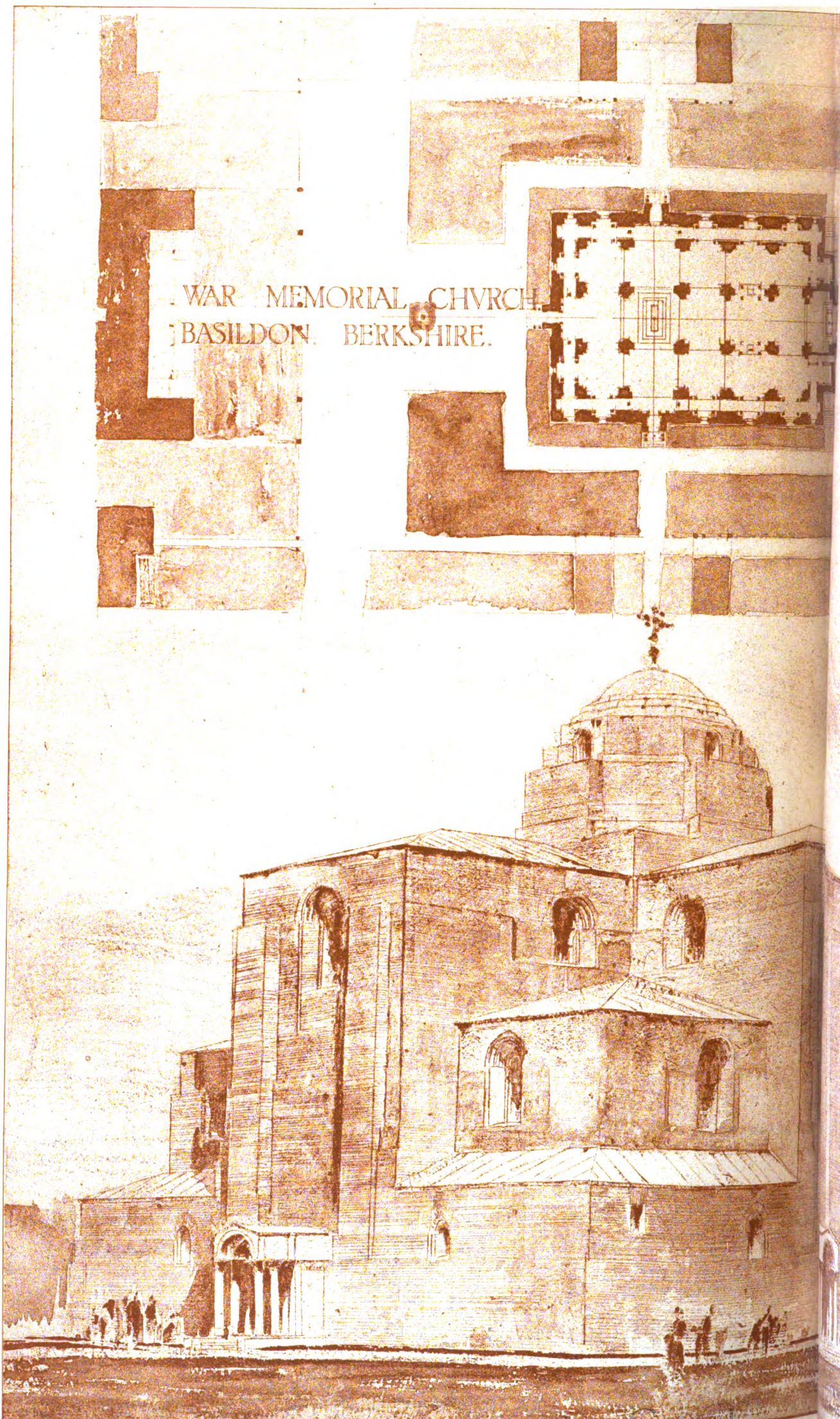
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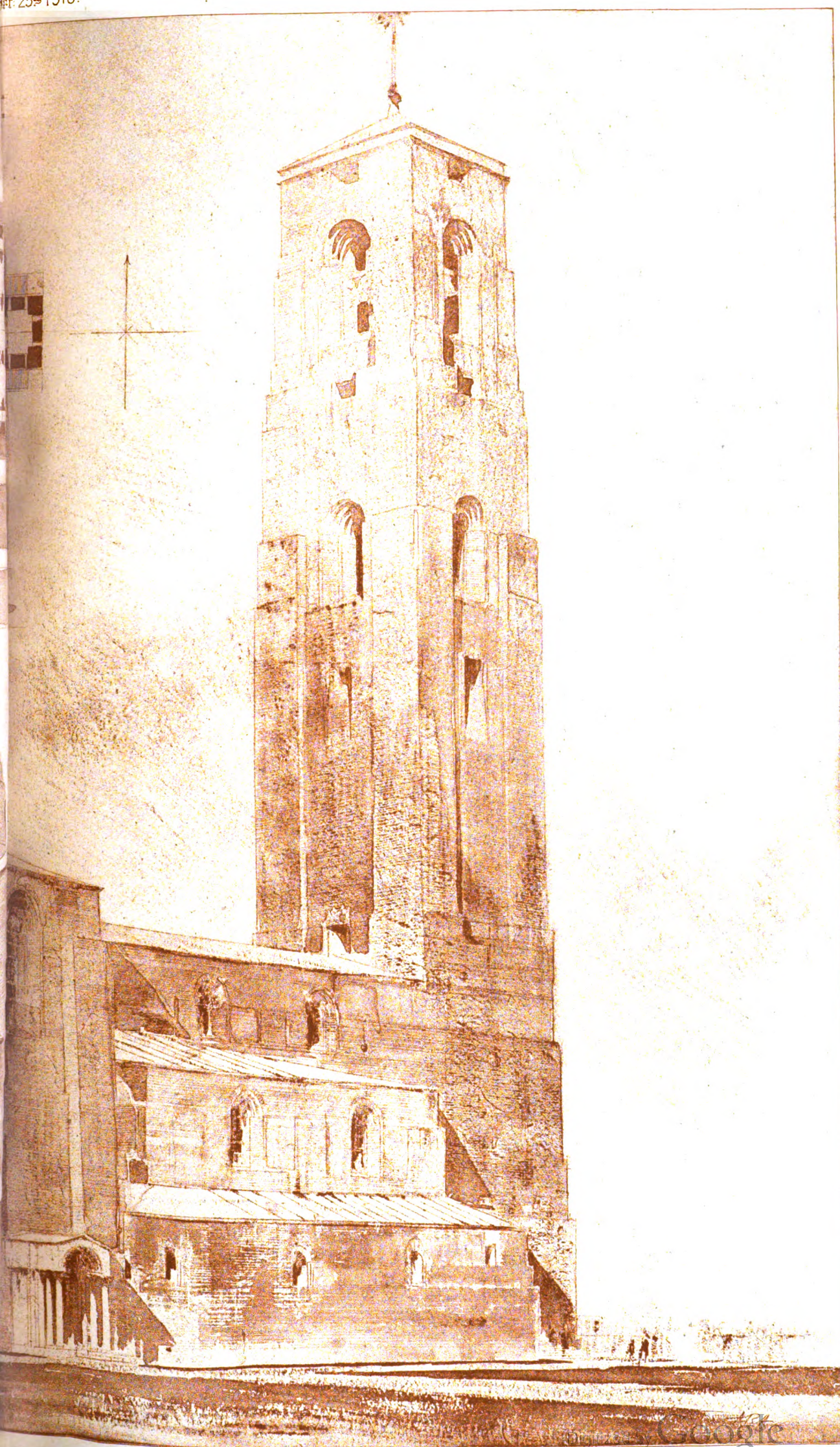
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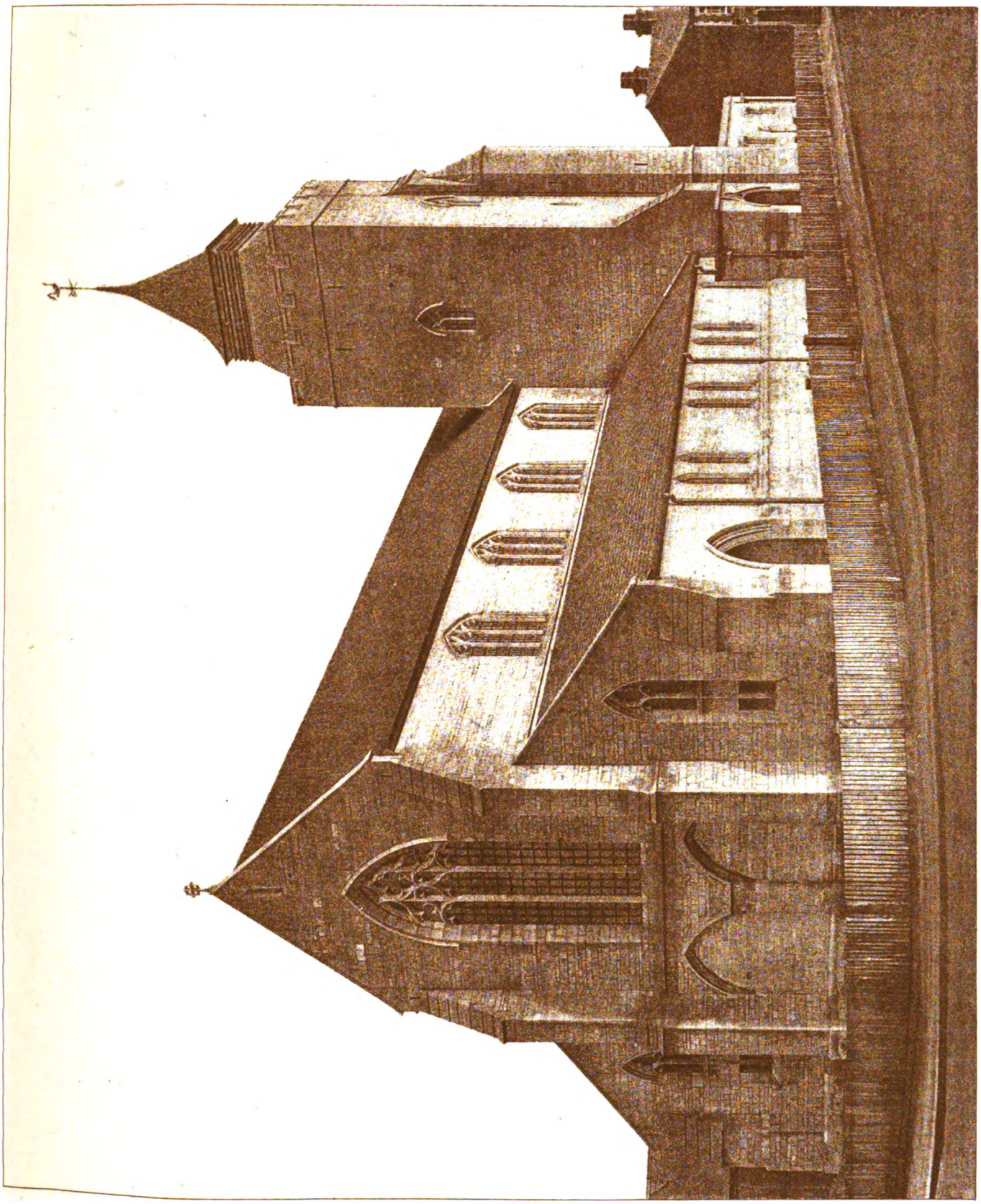


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NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.

At the opening meeting of the Winter Session, held at the Society's Room, Nottingham, on Monday, October 14, after certain routine business had been disposed of, the President, Mr. Harry Gill, M.S.A., addressed the members on "Recent Housing Legislation." He said:—"A question of the moment on the lips of our members is 'How will the profession be affected by the recent Housing Legislation?' At the outset it will be necessary for me to travel wide of the subject for a moment, in order to make the position plain, as the question immediately before us is wrapped up with a very much larger one. The years of strife and uncertainty through which we have passed have brought home to us, as nothing else could have done, the need for unity and federation. Architects as a class have been slighted and made of no account in the world. In spite of this, and while other professions have been organising their forces, a policy of masterly inactivity, of do nothing but 'wait and see,' has brought us to the verge of a new world without adequate equipment for the strenuous time which we all hope may soon be in front of us. It is useless to cry over things which are past, but it is well known to all men that while all the professions have been badly hit by the war, none have had to suffer so much as architects. All the younger members, many of whom, for physical reasons, should never have been called 'fighting men,' have gone to the front, where, let it be said with pride and admiration, they have nobly acquitted themselves; nay, they did not flinch even when called upon for the supreme sacrifice.

"But we cannot shut our eyes to the fact that while they were away fighting there was plenty of national work to be done, at home and abroad, for which their training eminently qualified them. This state of things has been rectified during the last few months, but it ought to have been done from the beginning, as it would have been done had we the power to compel recognition. But, alas! as a profession we have no unity, no combination, no organisation to which the young members can look with a sure and certain hope of obtaining support, though as loyal members of the allied Society, we have naturally looked to the parent Institute for leading.

"During the long and trying period of my term of office, although I am not personally a member of the Institute, I have never taken a single step where policy has been involved without first apprising them and asking for their advice. But they either do not realise the position of the provincial practitioner, or their methods are too slow and cumbersome to be of any service to him. They still cling to the old fetish of "do nothing while the war is on," because a pledge was given to the younger members that no alterations should be effected in their absence. I venture to say that when the pledge was given no one realised how lengthy or terrible the war was going to be, how severely the nation would be tried, or how changed the conditions would be after the war. If I know anything about the young men who are away, I know that when they come home again and find their profession starved out and belittled they will want to turn and rend somebody.

"Only last week, a captain home from the front on leave pleaded at the annual meeting of a kindred society that, in spite of all difficulties, they should keep things moving, as nothing helped the men at the front so much as to know that when they come home it will not be to find their life interests moribund, but with a flourishing and healthy programme.

"You may well ask, 'But what has all this to do with the question before us?' Only this—that as by our supineness we have failed to give much help in time of war, so shall we be powerless to give help in time of peace unless we wake up and bestir ourselves quickly. Things are beginning to move. Large schemes are being promulgated; schemes which can only be satisfactorily consummated by the trained expert. Are we going to stand idly by and see the face of the country disfigured with buildings devoid of any architectural distinction? Are we going to drop our hands and say, 'Hideous as it was in the past it is going to be even more hideous in the future, and there is no help?'

"We have come to the point when we must either assert ourselves or go under. Houses are badly needed, and private enterprise cannot cope with the demand. The State and the municipality are taking the matter in hand. Land is being acquired and laid out, typical plans are being discussed, but the architectural profession is only asked to pay its quota of the rates.

"In some cases, it is true, the official architect is being consulted. In such cases I do not know that we have a word to say. If any reasonable opposition to the official architect could be offered it should have been offered long ago. It would ill become us now, when we have let official architects become established all over the land, to say one word other than to welcome them to our societies. But the need for houses at the moment is so great that the official architect, with his host of routine duties that must have constant attention, cannot cope with it, and we feel that it is a fair field for the private practitioner if only he can get his claims recognised.

"In my opinion two things are essential if this housing question is to be handled in a proper way:—

"(1) The people who are to live in the houses must be educated; they must be taught to know what it is they want, and how to make the best of it when they get it. Perhaps you will say this is no part of an architect's duty. I am not so sure of that. A little missionary zeal might not be a bad thing for the profession, and it might be a very good thing for the public.

"(2) The avoidance of stereotyped plans and endless repetitions. We don't want *model plans* so much as *model men* who know how to build, and to adapt a plan to varying circumstances.

"We now come to the question 'What are we to do?' I think it is clear by this time to every member of an allied Society, if not to the R.I.B.A., that the one and only way is the adoption of the principle of registration. But that will take time, and our need is urgent.

"We may not advertise. We may not tout. It would be *infra dig.* to plead with the Corporation to take into consideration the position of poor architects whenever housing schemes are under consideration (although I see that one allied Society has already done something of the kind).

"At the request of the Council I made appeal to the R.I.B.A. for guidance to be sent in time for this meeting, with the usual result—'Will put it before Council at next meeting.' But we cannot wait indefinitely. Our members are asking, 'Must we be content to be the Cinderella of the professions for ever?' Let it be understood (and I think it is obvious) that in speaking thus no personal advantage is in my mind. I am acting solely in the interest of the younger members, whose confidence I am proud to think I have obtained.

"For lack of other means I propose:—'That a communication be sent to the R.I.B.A., stating our position, and urgently requesting them to bring to the notice of the proper authorities the claims of the profession to consideration in connection with schemes for National and Municipal Housing.'"

The resolution was approved, and an interesting discussion followed. It was also decided to request the Housing Committee of the Nottingham City Council to receive a representative deputation of local architects.

Private William Wallace, H.L.I., who has died of wounds received in action, was prior to joining up in 1914, at the age of 16½, articled to Messrs. Thoms & Wilkie, Reform Street, Dundee.

Lieutenant F. S. Parker, Royal Scots, has just been promoted Captain. Prior to joining up in 1914 he was engaged in the architectural profession.

An exhibit of American softwood timber available for reconstruction work after the war is open for inspection at the galleries of the R.I.B.A. The exhibit has been furnished by the Department of Commerce of the American Government. The exhibition is open from 10 A.M. to 5 P.M., Saturdays 10 A.M. to 1 P.M.

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DEMOBILISATION: DEPUTATION TO THE MINISTRY OF LABOUR.

A deputation of architects and surveyors waited upon the Minister of Labour at Montagu House, Whitehall, on Tuesday, the 8th inst., to lay before him certain proposals respecting the order in which men should be released from the Services as soon as peace is declared. The deputation consisted of the following members:—Mr. Henry T. Hare (R.I.B.A.); Mr. F. H. Hardcastle (Surveyors' Institution); Mr. Percy B. Tubbs (Society of Architects); Mr. T. W. A. Hayward (Municipal and County Engineers).

Mr. Hare opened the discussion by stating that a conference of representatives of the professional institutions of architects, surveyors and builders had recently been held at the R.I.B.A., and that amongst the matters discussed was the question of the order of demobilisation on the conclusion of peace. The points the deputation wished to put before the Minister, he said, were briefly set out in a memorandum which had been drawn up by the various bodies represented at the conference. The memorandum was as follows:—

"It is of admitted importance that upon demobilisation, men and women returning to civil life from the Army and Navy and munitions work should find as immediate an opportunity as possible of employment. To facilitate this object it is suggested that upon the declaration of peace employers should be encouraged to make application for the release (in advance of general demobilisation) of men and women of the directing class who act in the capacity of managers and organisers of the professional, commercial and industrial concerns with which they were connected before the war and who could get the various offices, organisations and branches thereof reorganised and in an efficient condition to deal with the businesses they are engaged in so as to enable them promptly to meet peace conditions.

"Most businesses are at present suffering greatly through the loss of persons of this class, and are in consequence crippled and disorganised so far as restarting ordinary pre-war business is concerned. More especially is this the case with businesses which have been diverted from their special pre-war work to munitions.

"This conference, therefore, recommends that a circular letter of advice should be issued by the competent authorities dealing with demobilisation at the Admiralty, War Office, and Ministry of Munitions, to all employers, professional institutions, and associations, inviting them to apply on demobilisation for the release of individuals in these categories, and stating their qualifications.

"The conference considers that all professional men come under one or other of these designations, but for the present purposes reference is particularly made to members of those institutions which it represents."

Mr. Hare went on to say that the staffs of all their offices had been seriously depleted by the war, and were indeed in some cases altogether non-existent. If the building industry was to be reconstituted rapidly, it was essential that the staffs of architects and surveyors should be replaced at the earliest possible moment, as their work was precedent to any extensive resumption of actual building operations. It was evident that the only means of getting back quickly the men required was for the employer in each case to be invited to give the names and qualifications of the assistants most immediately wanted.

Mr. Bridgeman stated that the proposal appeared to be a reasonable one, and it would be carefully considered by the authorities concerned. He inquired whether, if the suggestion were acceded to, the R.I.B.A. and the other bodies would be prepared to set up a tribunal to examine and report upon such applications as might be received.

Assurances were given that the various bodies represented could be counted upon to give the authorities all the assistance in their power. The deputation then withdrew.

THE RUINS IN BELGIUM.

Lately we have constantly heard of Belgium communes being fined for their refusal to reconstruct buildings damaged by the Germans during the invasion, or to otherwise obliterate evidences of German guilt. Malines, for instance, an undefended town, was uselessly bombarded in 1914 and three years afterwards was fined £1,000 for the determination of its citizens to preserve the signs of German crime. The citizens of Dinant, which was wantonly set on fire, were ordered to rebuild their houses or raze them to the ground. Many other towns preferred fines to compliance with the German scheme, among them being Antwerp, fined £5,000 in September 1917, Battice, £3,000, and Liège £20,000 on the same pretext.

Up to the present our evidence of the German determination to abolish traces of their crimes has come to us from Belgian sources. But now a German architect, Herr J. Stubben, in an article published February 1918 in the "Deutsche Bauzeitung" (German "Building Times") has painted the German side of the picture. He begins with a complaint that on a journey through the conquered countries he sees no "great activity of reconstruction, and this in spite of the constant and energetic activity of the German administration." He describes in detail the financial measures proposed, and continues:—

"However, as the Belgian banks on which we had counted would not collaborate, other means had to be found. Credits up to three-fourths of the price were offered on condition that the plans were first submitted to the German commissioner for the district, who was authorised to pay 10 per cent. of the costs immediately to the architect. . . . Mortgages to be taken up by the communes were also for. . . Unhappily the result of these official interventions did not answer to expectations. Passive resistance was shown both by communal authorities and individuals. In the towns the ruins persist except for some temporary restorations. Opposition was open. It is clear that by the perpetual sight of these 'pieces of evidence' the Belgians are trying to evoke horror and maintain witnesses of the war rage of Germany. Under these circumstances, Governor General von Bissing published a decree on September 12, 1916, announcing that for military reasons and for public security he would no longer permit the present state of destruction, and therefore the absolute demolition of all buildings not yet in process of restoration was obligatory. The communes were thus in a dilemma—demolish or restore. . . Thanks to this decree the removal of ruins at Louvain, Malines, Dinant and other places is fairly complete. . . The German administration showed a special profit of its solicitude by submitting artistic plans for the reconstruction of towns which had suffered especially by the war, Louvain, Malines, Dinant, Aerschot, Termonde.

The Germans do not yet appear to understand that their Kultur is almost as little loved as their brutality. Unfortunately for the success of these solicitous plans and the generosity of the subsidies, which, we may remember, were all paid from the Belgian budget, the "necessities of war" put a stop to building operations. Von Bissing's decree made April 20, 1917, the last day for ruins to be left untouched. On August 7 of the same year, according to Herr Stubben, the subsidies were stopped, as were the transport and provision of materials. Lamenting on this circumstance, which interrupts the work of restoration the author adds:—

"Some day it will be recognised what German administration has done for the country, . . . it has done everything to heal the wounds inflicted by war. It has not only tried to encourage the reconstruction of towns and property, but has tried to guide the restorations in the best paths."

We admire the determination of the people to keep their ruins. Their passive resistance says quite clearly "You knocked this down; wait a bit, we will build it up again in our own good time."

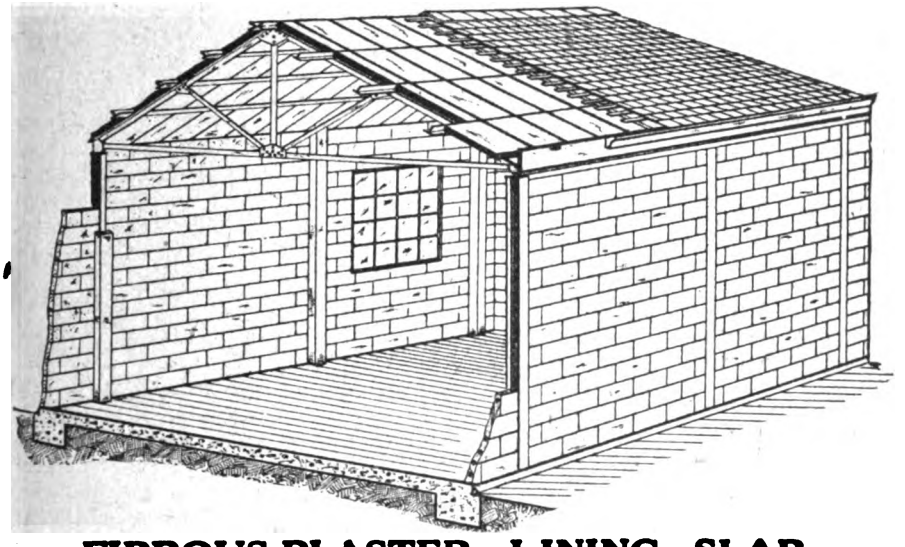
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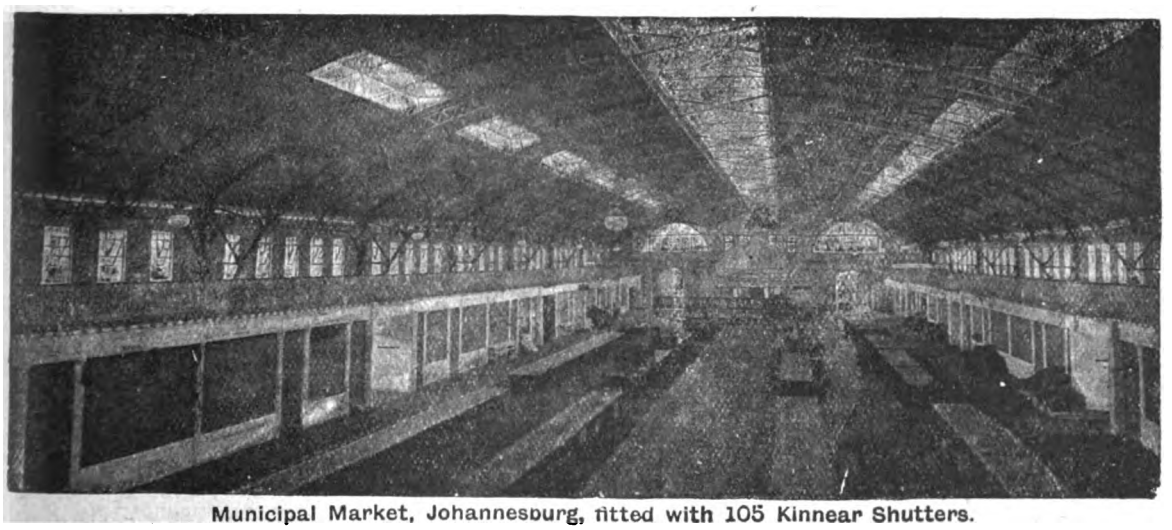
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GENERAL.

Mr. Alexander Knox, F.S.I., of 1 Bute Gardens, Hillhead, who died at Beauly, Inverness-shire, left £8,724.

Mr. R. C. Bryan, surveyor to the Wirksworth Urban Council for the past three years, has been appointed surveyor to the Newport (Shrops.) Council.

Mr. J. W. S. Brown, engineering assistant to the Burnley borough engineer, has been appointed surveyor to the Failsworth Urban Council.

Major David Davies, M.P., has offered the mansion house of Greg-y-nog, situated in the county of Montgomery, to the United States Army Medical authorities, free of rent, &c., to be used for any purpose the authorities wish.

Mr. James Price, M.I.C.E., engineer to the Cork Harbour Board, has been instructed to report on the desirability of building transit sheds at the deep-water quays and the probable cost of erection.

The Engineering Gold Medal of the North-East Coast Institution of Engineers and Shipbuilders has been awarded to Mr. H. R. Ricardo, B.A., for his paper entitled "High Speed Internal Combustion Engines."

Mr. Geo. L. O'Connor, F.R.I.A.I., is the architect for the rebuilding of 3 Lower Abbey Street, Dublin, and the contract has been let to Messrs. Thomas MacKey & Sons, Camden Street, Dublin.

The Archdeacon of Lewes is chairman of a committee formed for the purpose of obtaining funds for the erection of a permanent church to take the place of the iron building known as St. Richard's, Haywards Heath.

The borough surveyor of Eastbourne, Lieutenant-Colonel A. Prescott, D.S.O., R.E., has been awarded the Legion of Honour by the French President.

The Peterborough Rural Council decided at their meeting on Saturday last to apply for sanction to the Local Government Board to purchase 4½ acres of land at Walton for the erection of houses.

The death is announced of Corporal Stanley Hargreaves, R.E., of Clitheroe, from wounds received at the front. Prior to joining up in 1914 he was engaged as a builder's draughtsman.

Sapper Harry Tough, R.E., who has died in Germany from wounds received in action, was the second son of Mr. William Tough, builder, Lumsden, and Hartington Road, Aberdeen.

Various developments are proposed in connection with the Blackpool Corporation Tramways Department, including the provision of new car repair and engineering workshops and administrative offices at Rigby Road.

Paisley Art Institute has been presented with two works for the permanent collection, a portrait of Mr. Peter Coats painted by Major Irvine McNalty, "Home from the Fishing, St. Monens," by Mr. W. Snodgrass Bryce.

The Camborne War Memorial is to take the form of the removal of a block of buildings in the centre of the town, thus forming a square, and in the centre the erection of a granite cross on which the names of the men who have fallen should be placed.

The Wolverhampton Education Committee contemplate the erection of a new technical school, and have approved the recommendation of the Technical School Sub-committee that the Deanery House be taken down and the site provided for the new school.

The Western District Committee of the Haddington County Council propose to erect 200 new houses under the new housing scheme. This does not, however, include provision for the mining population, for whom a new scheme will be required. The Eastern District Committee's scheme provides for the erection of 65 houses.

Having considered the scheme proposed by the Local Government Board to meet the demand for housing accommodation after the war, the Loftus District Council gave it their approval and have agreed to erect 300 houses. A scheme is to be prepared to be started after the end of the war.

A verdict of accidental death was returned at an inquest held at a N.E. coast town on Thursday last week on the Rev. Norman Thomas Wass, a Congregational minister, who was engaged as a war worker, and fell from the top of a building attached to an aerodrome.

A black oak screen has been erected in the parish church at Reading by Mr. and Mrs. Carter as a memorial to their son, Donovan Waldegrave Carter. It occupies two bays of the arcading dividing the chancel and the Lady Chapel, and was carried out by Samuel Elliott & Sons.

By the will of Mr. James Hugh Welsford, managing director of J. H. Welsford & Co., Ltd., Liverpool, shipowners, who left an estate valued at £820,817, the Liverpool Cathedral Building Fund will benefit to a considerable extent. At the lowest estimate the amount will not be less than a quarter of a million.

Mr. E. A. Sandford Fawcett, M.I.C.E. (Local Government Board), having been unable through ill-health to attend to his duties for the past two months, has resigned the secretaryship to the Ministry of National Service. In the earlier stages of the war he acted as secretary to the Man-Power Distribution Board, and became associated with Mr. Neville Chamberlain when that body was superseded by the National Service Department, subsequently merged in the Ministry of National Service.

The Imperial War Graves Commission at their last meeting stated that an agreement had been entered into with the Italian Government for the provision of land for the burial of British soldiers in Italy on practically the same terms as those granted by the French and Belgian Governments. A resolution was passed thanking the Italian Government for their generous action in this matter. The Commission appointed Sir Robert Lorimer, K.C.B., A.R.S.A., F.R.I.B.A., to report on the architectural treatment of cemeteries in Italy and Egypt.

The terms of reference of the Scottish War Memorial Committee, appointed by the Secretary for Scotland, with the Duke of Atholl as chairman, are to consider what steps should be taken towards the utilisation of Edinburgh Castle for the purposes of a Scottish National War Memorial, as indicated in the Secretary for Scotland's statement to the House of January 31 of this year. In the course of that statement Mr. Munro said that the War Cabinet had indicated their general approval of the proposal to dedicate the Castle to the purpose named, which might ultimately develop into the even wider purpose of a treasure-house for the national history of Scotland.

Heroism in the field is so general at this period that frequently heroism at home is somewhat overlooked. The death is announced this week of a young Canadian engineer, Leonard Sawyer Girling, who, hearing that his wounded brother, Private Stanley Girling, of the Canadian Scottish, needed an infusion of blood to save his life, volunteered for the operation and died as the result. Both came from Canada in 1915 as munition workers to Woolwich, and worked there together until 1917, when Private Stanley Girling joined up. Seriously wounded at the front, he was brought home to Orpington Military Hospital. The father of these two sons (before going to Canada) was a master builder in business in Woolwich.

At the meeting of Swansea Harbour Trust last week, Mr. Roger Beck presiding, it was decided to grant a lease to Messrs. Harris Bros., Ltd., at £1,000 a year, of a site at the South Dock Pill for a dry dock. The chairman reported that it was encouraging to hear from the Anglo-Persian Oil Co. that as soon as it could obtain materials and permission to go on, it would proceed with its new works near Swansea as energetically as possible, with a view to recovering in part at least some of the valuable time that had been lost through war conditions. Mr. W. T. Farr, in submitting the financial statement, said in August there was a very heavy deficiency, amounting to £7,495, and this, notwithstanding the volume in trade in comparison with 1917, so far as tonnage was concerned, was practically the same. The decrease was due, to a certain extent, to the strike in August, when the port was brought to a standstill for practically a week, and also to the interposition of the usual August holidays. Those influences had brought about a reduction in almost every item of revenue, and an increase in every item of expenditure.

The Scottish War Memorial Committee consists of the following: Brigadier-General the Duke of Atholl, K.T., C.B., M.V.O., D.S.O. (Chairman); the Right Hon. Lord Carmichael, G.C.S.I., G.C.I.E., K.C.M.G. (Vice-Chairman); the Admiral Commanding-in-Chief at Rosyth; the General Officer Commanding-in-Chief, Scottish Command; the Lord Provosts (for the time being) of Edinburgh, Glasgow, Aberdeen, Dundee, and Perth; the Right Hon. William Adamson, M.P.; the Right Hon. Lord Balfour of Burleigh, K.T., G.C.M.G., G.C.V.O.; Mr. James Brown, Ayr; Sir John Burnet, R.S.A.; Lieut.-Col. D. W. Cameron of Lochiel, C.M.G.; Lieut.-General Sir J. Spencer Ewart, K.C.B.; Sir John R. Findlay, K.B.E.; the Right Hon. Lord Glenconner; the Right Hon. Sir J. H. A. Macdonald, G.C.B.; the Right Hon. Sir Herbert Maxwell, Bart., of Monreith; Sir Hector Munro, Bart., of Foulis; the Right Hon. Lord Newlands; Sir William Robertson, Dunfermline; the Very Rev. A. Wallace Williamson, D.D.; the Right Hon. Eugene Wason, M.P.; Sir George Younger, Bart., M.P. Captain George Swinton, Gattonside House, Melrose, will act as Secretary to the Committee.

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THE ARCHITECT
AND CONTRACT REPORTER

VOL. C.—2602. NOVEMBER 1, 1918.

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Memorials and Memorial Schemes.

We give in this week's issue illustrations of a grandiose scheme for replanning a great section of London lying between Victoria Street, Westminster, and Vauxhall Bridge Road, which has been planned by Major Pawley. Its central feature is a new main avenue leading from Victoria Station to the new Lambeth Bridge, which is to be rebuilt by the London County Council. The new avenue is to be lined with a large number of public buildings, including the new Resident University of London, and we understand has the support of Lord Leverhulme and a large number of other prominent men, and the official or unofficial support of a number of public bodies. The scheme is too important a one to be summarily approved or dismissed, but the initial question is whether it is financially practicable, as to which we have no certain and definite knowledge. If it is not, and we have grave doubts on the subject, it may be dismissed from consideration whatever its other merits are. It would be easy to show many magnificent schemes for reconstruction which could be carried into effect by an authority possessing unlimited power and money, which are absolutely useless as practical proposals.

The question is one primarily of finance. We know that the execution of Wren's great plan for the rebuilding of the City of London which, if it had been carried out, would have saved future generations so much, was rendered abortive by the strength of the opposition raised by private owners and the shortsightedness of authorities, although the area to be planned had been devastated by the Great Fire and was devoid of all but the ruins of its former buildings. In this case the area is covered by buildings the removal of which would raise great financial claims, and we have therefore to very carefully consider the cost before we are justified in approving it. Fortunately for the nation, if unfortunately for the ardent town planners, there is no chance now that a German Nero will reduce London to ashes, leaving a clear road for a great scheme of reconstruction. As this is described as being a memorial scheme, it is opportune to consider the subject of memorials generally, what they mean and what is practicable or the reverse.

Private and personal memorials we shall have in abundance, as it is fitting we should, to afford personal commemoration to those who have done worthy deeds in a great crisis of our history. All we can say of them is that every effort should be made to induce the public to call in competent professional advice, and to induce public authorities to call in equally competent advice, to enable them to exercise control over the placing of such memorials when they are to be erected in our churches and public places.

When we are dealing with the question of public memorials, by which it is proposed to commemorate the successful ending of the present war or the deeds of individuals who have contributed to it, several questions arise—firstly, as to what it is the nation most needs when the war is over; and, secondly, what form of structural monument or monumental scheme is most in accord with the wants of the day.

Now there can be no possible doubt that a nation which has had to pile up an immense war debt which it will take several generations to discharge, and will meanwhile burden our whole financial position, a nation whose trade, commerce and industry have been crippled, a nation many of whose citizens have suffered temporary or permanent financial losses, chiefly needs the speediest return to normal conditions affording its component individuals opportunity to re-establish themselves. We must not add to the Pelion of the war debt the Ossa of further charges for what is not absolutely necessary to the community. This, we think, is the main and dominant consideration which should govern all others.

But if the growing needs of our population or commerce need new expression and expansion there may be room for doing what must be done well and effectively. After the Napoleonic Wars our forefathers built Waterloo Bridge, to the abiding future delight of every Londoner who walks along the riverside. The bridge was needed, and it was but a question of carrying it out well instead of meanly. We in our generation, having come to the conclusion that a bridge is needed at Charing Cross, and that the South-Eastern terminus could with advantage be placed south of the river would be amply justified in building a great bridge which would commemorate the present struggle as did Waterloo the termination of the war of a hundred years ago. There is no limit to the monumental expression which can be conveyed in a bridge and its approaches which afford the fullest scope for architect, engineer, and sculptor.

Then, again, we have several great buildings, of which the British Museum is one, where further accommodation is needed, involving schemes which will cost several millions to complete. We know that if we carry out these and carry them out well they are compatible with the fullest monumental expression, and that we are only doing what must sooner or later be effected for practical ends.

In addition, there is the proposal which has so frequently been raised of building a Memorial Chapel in connection with Westminster Abbey which would appeal to the nation as a whole, and which may be called a practical necessity, since we cannot otherwise find room for the memorials to the great men whose worth has been proved in the greatest crisis in the history of our race, and whose memory will be treasured as long as language has a meaning for mankind.

And, similarly, in most of the provincial towns and cities of the country there are great projects whose execution has been delayed for years, but which will serve as worthy memorials on which the exponents of all the arts can express themselves suitably, and these rather than grandiose schemes for objects which fulfil no certain practical needs seem to us to be suitable subjects for memorials.

If, as we all hope, we have learned from our experiences during the war to work in combination to eliminate waste and increase production, we may after some decades reach the threshold of a greater national prosperity founded on the harmonious co-operation of the different sections of the population, and then we may suitably expand our views, giving fuller expression than we can wisely do now to our æsthetic impulses; but at present we cannot be sure that we shall reach that promised land.

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Illustrations.

BIRD'S EYE VIEW SHOWING MAJOR CHAS. J. C. PAWLEY'S SCHEME FOR AN EMPIRE WAR MEMORIAL.
CHURCH WORK OF MESSRS. CRAM, GOODHUE & FERGUSON
THE SHAMBLES, YORK.
MERCERY LANE, CANTERBURY

Notes and Comments.

Paper.

It is written that it is better to be born lucky than rich, and some of those who produce papers were fortunate enough at the outset of the war to have very large stocks of paper on which they have been able to draw. Others, too, were fortunate in taking a pessimistic view of the situation in the early period of the war and ordered large stocks when the difficulties of obtaining it were not anything like as great as they are now. The invincible optimists who thought that the war must speedily be over have been punished by having to pay enormous prices for paper they would normally never have dreamed of using. We like others have suffered, and in spite of every effort to get what we want are often compelled to use paper which we know is not good enough for its purpose. We must ask our readers' indulgence if some of the copies they get are apparently badly-printed. The fault is not in the printing or in the quality of the blocks, but in the paper, which takes the blocks and letter-press illustrations badly. We can assure our friends when these difficulties are, as we hope they may be before long, things of the past, we shall pay more attention than ever before to the importance of a good production, but at present we have to take the best way through Purgatory that we can!

The Employer.

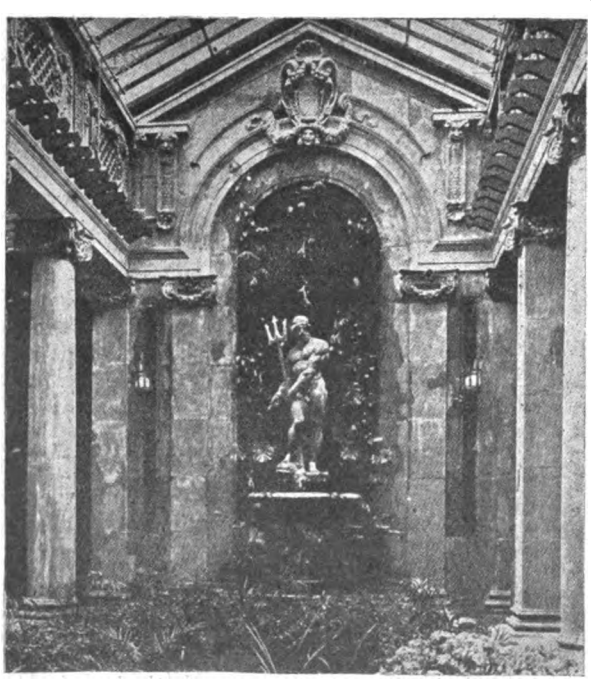
We have received a number of the "Employer," a monthly paper which was first produced this year, and which, as its name testifies, is brought out in the interests of employers. Why, it asks, when Labour is willing to govern the world, should the employers' organisation have no recognised programme? We admit that they should organise and put forward their views, which are well stated as involving the education of the people in the permanent advantages which would arise from putting an end to the insane limitation of production that has been a shibboleth in the past. Labour should be shown conclusively that little would be gained from taking from Cæsar that which is Cæsar's, while much would be gained by doubling production. In the one case, if Labour could take all of the employers' profits, which, as Euclid would put it, is absurd, Labour might benefit by a fifty per cent. advance on its wages, in the other case it may gain nearly one hundred per cent. advance. The American workman has solved the question and gets the wages, the English worker, for the most part, talks socialism and goes without the money, and year by year and decade by decade we drop further and further behind our great cousins in the West. Labour really need not trouble itself by passing votes in favour of Home Rule for India, of whose conditions it knows absolutely nothing, while its own home garden is full of rank and useless weeds. The "Employer" may do good if it speaks with courage and tells the truth which Labour seldom gets from the busy politicians who want its votes.

A New Metropolitan Building Act.

The September number of the "Journal of the London Society" contains an article advocating the passing of a New Town Planning Act under which areas already covered by building can be dealt with. The times may or may not be ripe for this, but if the rights of private owners are to be further interfered with they might as a "quid pro quo" expect some abatement of the unfair and onerous conditions as to rating and other matters which press so heavily upon them. But we agree in thinking that it is time that the law of ancient lights were modified, but we do not quite agree with the writer of the article who refers to the enormous increment possessed by those who have the right to raise their buildings to a height of eighty feet on old foundations, irrespective of the width of the street. As a matter of fact the law of ancient lights operates in most cases by preventing the erection of very high buildings in most situations. We should rather put it this way, that the law of ancient lights prevents many men from utilising the resources of sites and should be replaced by something on the lines of the Zonal Law of New York under which the heights of buildings are regulated by a system applied to whole districts. The writer advocates the acquisition of sites along new streets by the central authority in order to make profits which may be well enough in moderation, but might become a precedent for extensive municipal trading in fact.

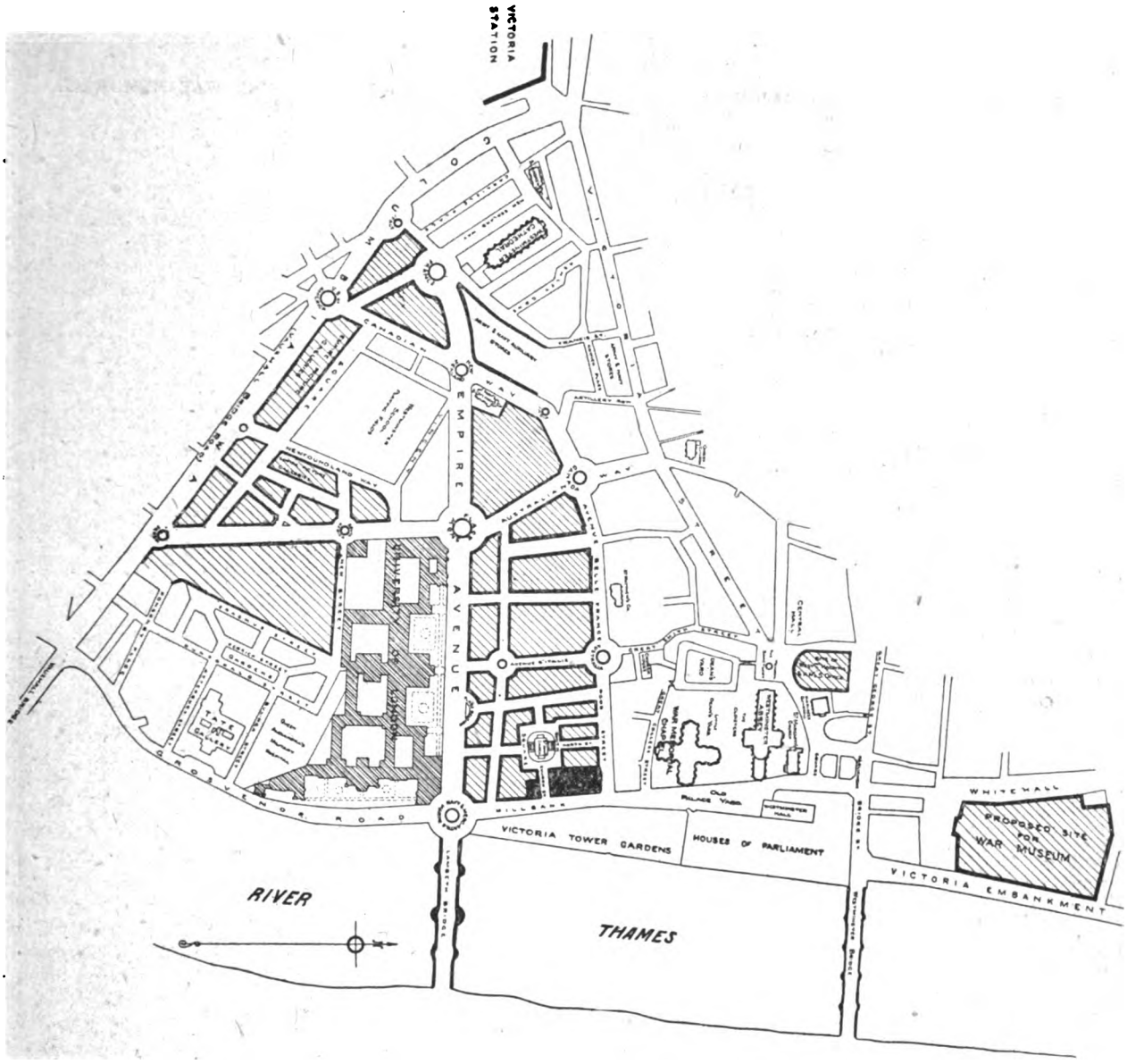
The Right Time for Criticism.

We are sorry that an embargo was laid on us which prevented our making any allusion to Major Pawley's Memorial Scheme before the date of the public meeting called to consider it. On the assumption that a free discussion of a subject on its merits is what is wanted it would appear to be a pity that none of those invited to the meeting should have the opportunity of reading the criticisms of the architectural press beforehand. But as the decision of the meeting whatever it may be will only decide preliminaries we hope the subject will be considered by the Royal Academy, the Royal Institute of British Architects, and other like bodies besides the municipal authorities interested and the London County Council. We also hope that no one will be deterred from leaving the Advisory Committee formed if he feels that he has made a mistake in joining it. Influential as the preliminary list of names appears to be, there are omissions from it which are noteworthy. Lord Esher, Lord Plymouth, and Sir Aston Webb are men whose adhesion to the scheme would have meant much, and we should much like to hear whether they have been approached and refused to join or whether they have been overlooked by Major Pawley and his friends.



A CONSERVATORY.—JOHN RUSSELL POPE, ARCHITECT.
From the "American Architect" (see Review).

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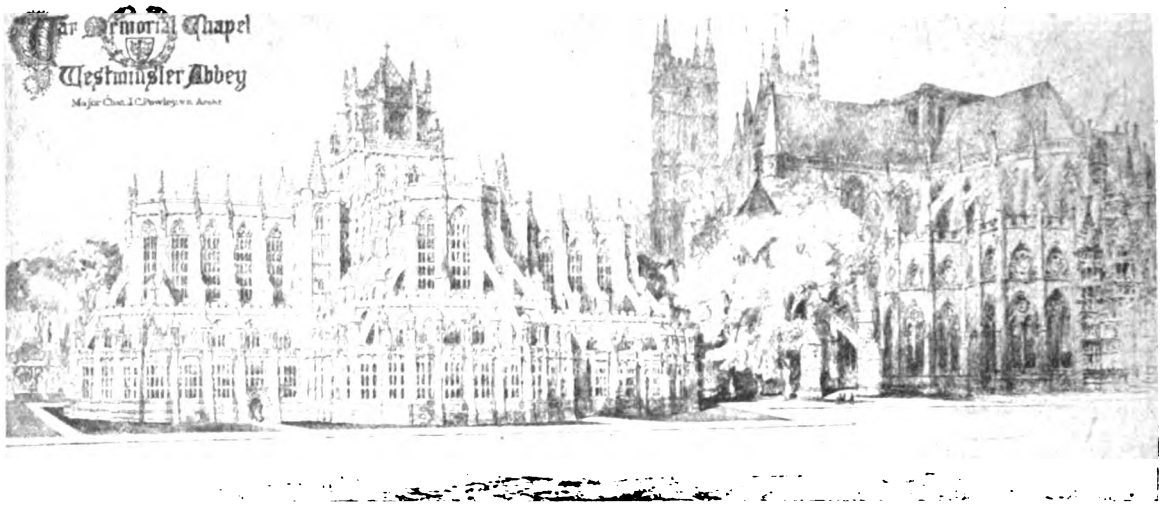


The Empire War Memorial Scheme of Major Pawley.

We illustrate in this issue the Empire War Memorial Scheme of Major Pawley, which consists of replanning the greater part of the area lying between Victoria Street, Westminster, and the Vauxhall Bridge Road, which is to be widened and renamed Columbia Avenue. We doubt if all the distinguished men included in Major Pawley's Advisory Committee quite understand the magnitude of his proposals, which are more easily shown on paper than converted into brick and stone, and we believe time and reflection may modify their views, especially when they are brought face to face with the financial side of the proposal. The main feature of the scheme is the so-called Empire Avenue, which starts from a circus—circuses are scattered with an unstinting hand over the whole area as replanned by Major Pawley—nearly opposite the east end of Westminster Cathedral. This circus communicates by a street of modest width with Columbia Avenue, where we get another half circus. Empire Avenue may be described as connecting Westminster Cathedral with Lambeth Bridge. To reach it we should probably have a side street from Columbia Avenue, marked by a monument to Italy (half circus). Opposite the cathedral—but with a lofty indifference to axial lines—we get France (complete circus); further on New Zealand almost blocks the crossing of Canadian Way and Empire Avenue, but continuing our journey we reach Place Mons (whole circus), and on arriving at Lambeth Bridge and at the riverside we reach another monument to the British Navy (whole circus). Belgium gets a little semi-circus on the way between Mons Place and Lambeth Bridge, which breaks up the monotony of the journey. The United States are to have a monument, as is fitting, in Columbia Way, dignified by another circus. India, like New Zealand, partially blocks a road, while Canada and Australia both get a monument with a circus round it. Altogether the scheme, if carried out, will give employment for most of our leading sculptors for some time to come, whether at the taxpayers' expense or that of a repentant and contrite Germany we do not know.

Now we come to the architects' spoils, which include the residential University of London, placed fronting the Embankment and Empire Avenue. Lest we should be uncertain how this and other buildings should be arranged Major Pawley has given us elevations and perspectives—but not plans. We suppose he knows the requirements of the University of London, which possibly have been communicated to him in a vision. The architectural treatment is, however, unfolded before our eyes, and we get nine domes, two towers, and other features, including a huge courtyard facing each street. The eastern side of Empire Avenue lends itself pleasantly to masses of public buildings, galleries and institutions, and among them our architects will certainly find plenty of work for their talents under the general direction of the author of the scheme. But this is not all. Major Pawley has designed a memorial chapel near the Abbey and shown it in plan, elevation, and internal perspective. It appears to cover more ground than the Abbey itself, but it must be remembered this is a big scheme! The entrances are arranged cunningly in the angles of the crossing, and such equal favour and impartiality has been displayed in the design that visitors will hardly know what is nave, chancel, or transepts; it might in fact be a shrine dedicated to four saints having equal claims on the piety of the public. Generally speaking, we should say that Major Pawley has Henry VII. Chapel in mind in making the design, but it would maintain its relative importance by being four times

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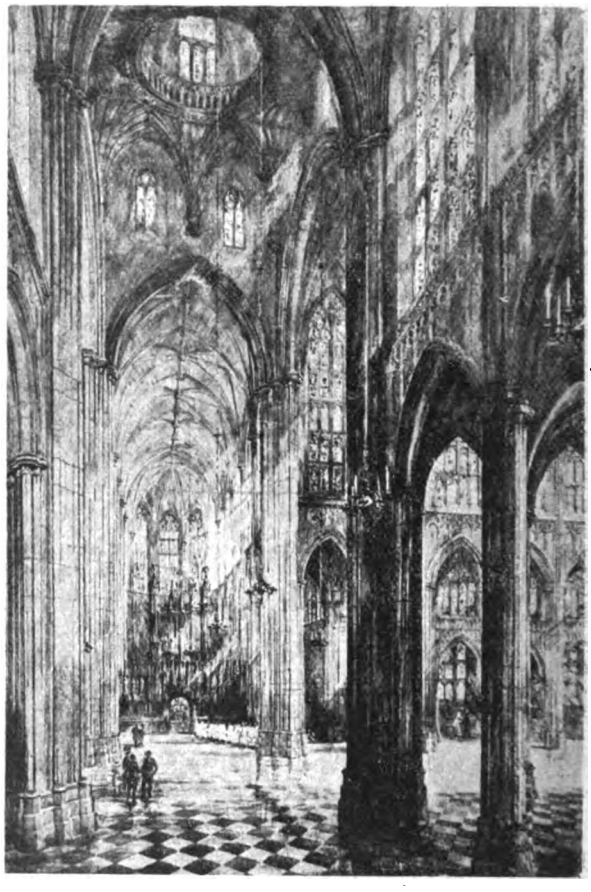


THE MEMORIAL CHAPEL.

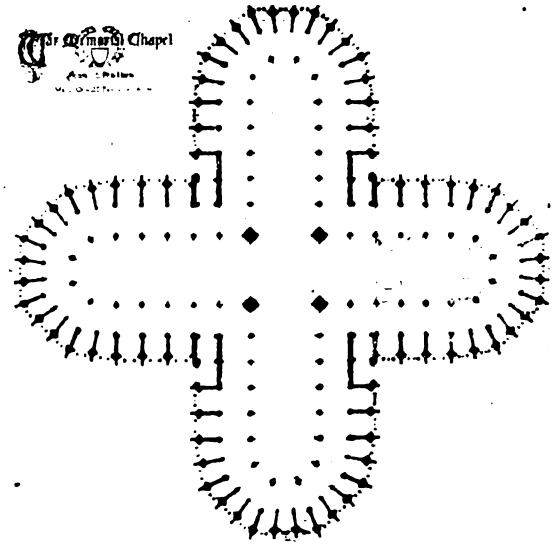
as big. A site is shown for the War Museum along the Embankment, presumably to show that Major Pawley is not prejudiced against the erection of public buildings for which there is no place in his own scheme.

In a word, the general planning of the scheme appears to us to be thoroughly bad, but in the design and lay-out of the individual buildings Major Pawley has courted and obtained a Sedan. The symmetrical design of the Embankment front of the London University is only symmetrical by the inclusion of a block of buildings on the other side of Empire Avenue! The Avenue in fact may be described as cutting the front into two unequal parts. The treatment of difficult re-entering angles where they occur is gracefully hidden by impossible trees. In a word, the whole of the designs might well be the work of an ambitious but immature young student. If some generous millionaire were to provide the entire funds for carrying out the scheme according to Major Pawley's designs, we should hope in justice to the æsthetic feelings of the public that the offer would be refused with thanks.

We may be in a small minority in our view, but we can see no justification or point in a project which appeals to us as being impossibly costly in execution and unskilful in its arrangements. We are sure a great bridge at Charing Cross is needed, but it is questionable whether there is need for any between Westminster and Vauxhall. Whatever support the scheme may obtain in its initial stages we are sure that the logic of facts will compel its abandonment and relegation in the limbo of impossibilities.



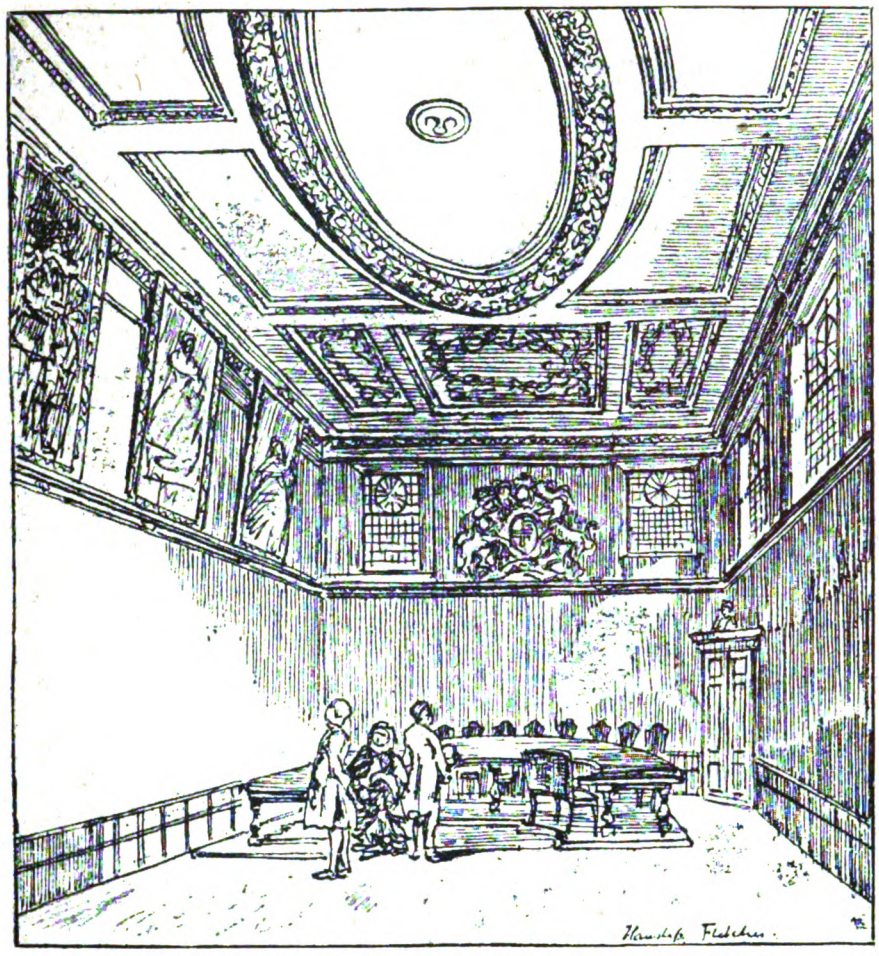
INTERIOR OF MEMORIAL CHAPEL.



THE first ordinary meeting of the Institution of Civil Engineers will take place at 5.30 P.M. on Tuesday, November 5, when an address and presentation of medals awarded by the Council will be given by the president, Sir John A. F. Aspinall.

MR. P. M. CROSTHWAITE, Local Government Board inspector, has paid a visit to Rhyl for the purpose of conferring with the Urban District Council as to their seafront problems, which have become very acute owing to coast erosion and sand-drift troubles. After making an inspection of the great damage done to a considerable length of the sea wall and the encroachment of the sandhills on to the Marine Drive, he impressed upon the Council the advisability of proceeding as early as possible with the sea wall repairs, and the training of the river mouth under the supervision of an expert engineer. He did not, however, see any chance of a loan for sand-drift removal.

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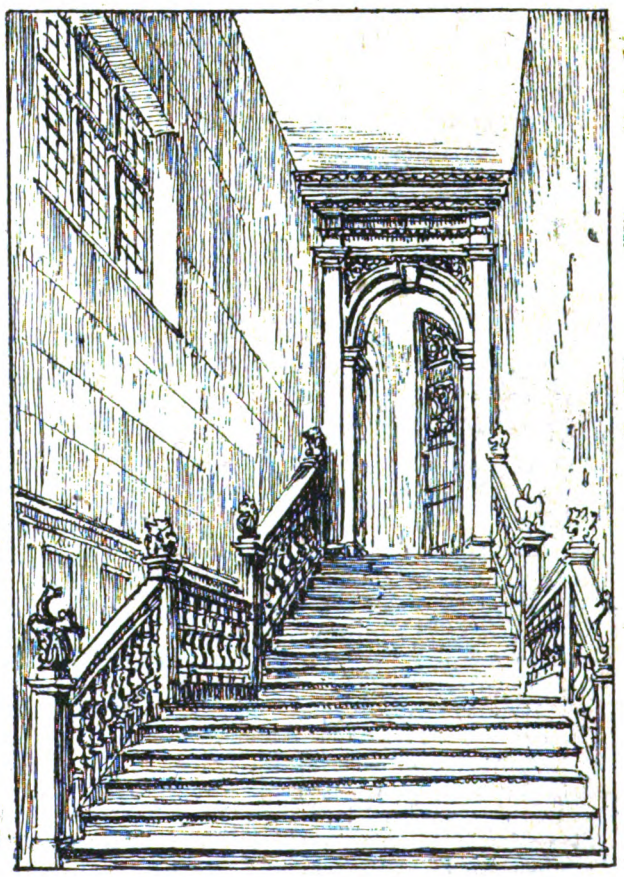
WEAVERS' HALL.—From a Drawing made at the time of the Demolition.

NOTES ON THE DEMOLISHED HALLS OF THE CITY COMPANIES.—NO. III.—FINAL.

The Broderers' and Weavers' Halls.

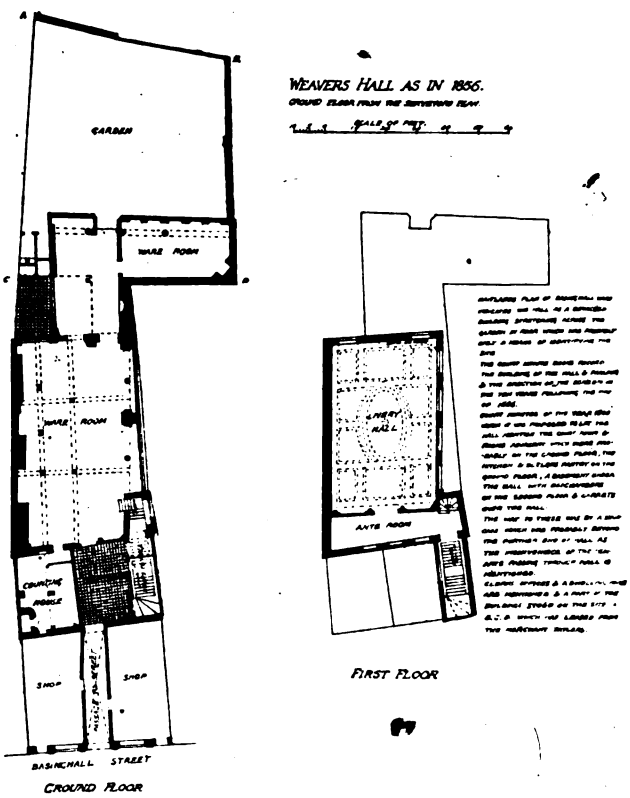
The *Broderers' Company* was incorporated in 1561, but in the time of Edward III. they were a body of considerable importance. They may have been an offshoot of the Weavers. Their Hall was in Gutter Lane, the site being conveyed to a Broderer early in the reign of Henry VIII. They are stated by Maitland to have had a small but convenient Hall to manage their business in, and the dimensions of the site are recorded in the survey made by Mills and Oliver after the Fire of London. This site is now occupied by a warehouse. The Hall was demolished during the last century, but a water-colour drawing of the quaint entrance to it was made by T. Hosmer Shepherd, and is included in the Crace Collection.

The *Weavers* claim to be the oldest among the English guilds, and received a Charter in the reign of Henry I. which was confirmed by one from Henry II. They are stated by Maitland to have a handsome Hall in Basinghall Street. It was described as having been adorned inside with fretwork, hangings, and a screen of the Ionic order. It was finally demolished in 1856, the office building, No. 22 Basinghall Street, occupying the site. Before it was demolished small illustrations of the Hall and staircase were given in the "Illustrated London News," from which the two line drawings have been made by Hanslip Fletcher. A water-colour drawing of the entrance from Basinghall Street was made by Mr. Hosmer Shepherd. These with some plans made from a basis of old drawings in the Company's possession are all the available data obtainable. The building contained a Court Room and adjoining rooms which were probably on the ground floor with basement under, the Hall with bedchambers over and garrets over the Hall. A clerk's offices and dwelling house are mentioned as being built on the back part of the site, which was leased from the Merchant Taylors.



STAIRCASE, WEAVERS' HALL

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ENTRANCE TO BRODERERS' HALL.—From a Drawing in the Crace Collection.

CORRESPONDENCE.

Proposed Federation of Architects, Surveyors, Constructional Engineers, &c.

To the Editor of THE ARCHITECT.

SIR,—It is suggested that some scheme should be initiated whereby all architects, surveyors, constructional engineers, &c., *temporarily* engaged in Government offices could be united in one strong Association. The objects, inter alia, of such an Association would be:—

(1) To uphold the status and promote the welfare of professional men *temporarily* engaged in Government offices and to provide opportunities for association between them with a view to *united action* on all matters affecting their interests.

(2) To consider the conditions likely to affect members of the *temporrary* professional staff on the conclusion of hostilities, and particularly those relating to housing schemes and other national building work.

An Association of this nature, comprising over 150 architects and surveyors (*temporary*), exists in H.M. Office of Works.

It is suggested that a similar Association might be formed in each Government Department where professional men are engaged *temporarily*, and all such Associations be united in one Federation.

Leading members on the Councils of the Royal Institute of British Architects and the Society of Architects have been (unofficially) approached and have signified their approval of the scheme here outlined.

A provisional Committee consisting of Messrs. Alfred Cox, Fellow Royal Institute of British Architects; R. V. Milnes Emerson, Associate Royal Institute of British Architects; E. Ravenscroft, Licentiate Royal Institute of British Architects; J. Teifion Williams, Member Society of Architects; H. A. Aitken, E. H. Brooks, and D. Carmichael has been formed to consider ways and means for putting this proposal into operation.

All professional men in Government Departments who are interested herein are invited to communicate with Francis H. Witts, Hon. Organising Secretary (pro tem.), c/o C. M. O. Scott, Esq., 2 Dean's Yard, Westminster.

Condensation on Concrete.

SIR,—The American Concrete Institute is doing good in publishing a warning on condensation, for it is not well known that concrete is subject to condensation when the air is wet or humid, and that a nonporous concrete is subject to more condensation than a porous concrete. For instance, a weak concrete of broken brick aggregate will have proportionately the same porosity as the porous brick itself.

Interior plastering will, however, prevent condensation on any sort of concrete. I have spent many pounds and much time in experimenting with various plaster mixtures to find the most absorptive plastering material. I found that a good method is to float on the interior of the concrete walls with ordinary plasterer's lime and sand mortar (about three of sand to one of lime), lightly keyed in the usual manner to receive the final setting coat. This three and one coat must be left until strong pressure from the thumb makes no impression. It may be necessary to leave it for several days, according to the weather. The finishing coat of lime putty, sand and plaster of Paris may then be applied with safety. Immediately before this latter coat sets it should be finished with a soft hair brush which produces a granular surface.

The finishing coat is known in some districts as "plasterer's skimming." It is also known as "limed plaster." The proportion depends on the quality of the lime which varies in different districts.

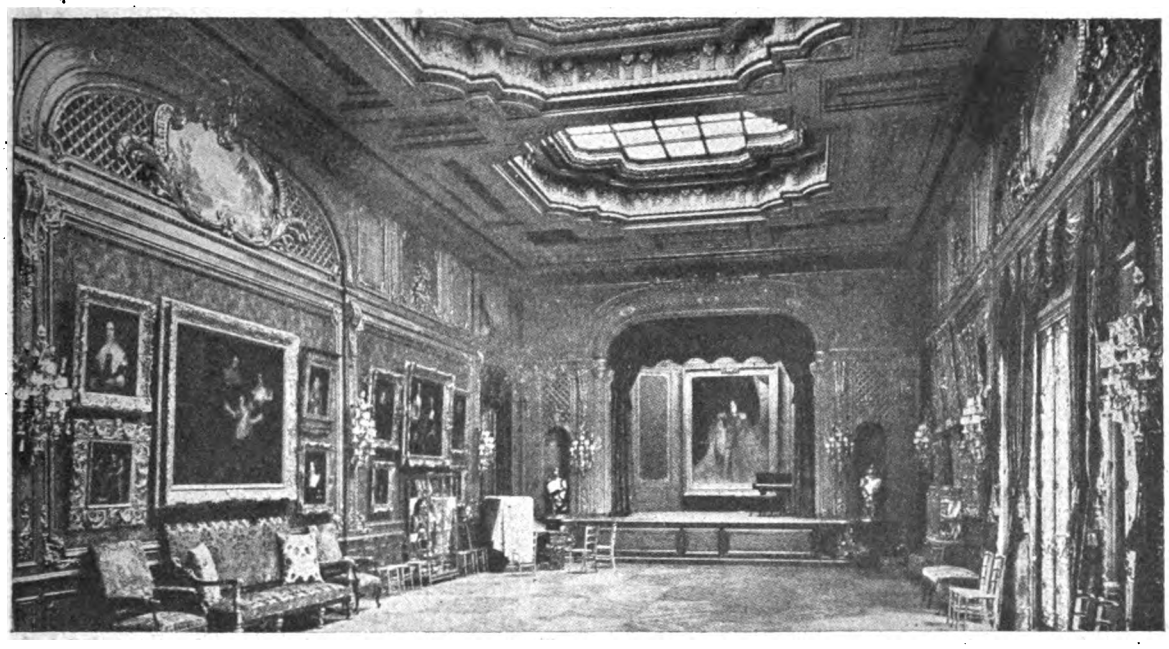
Instead of making dense concrete for walls, it is much cheaper and more hygienic to use a very porous concrete, and to render it with a cement waterproof exterior coating, for the fiercest driving rain cannot penetrate a ¾-inch pudloed cement rendering. Porous concrete like all porous materials has also the quality of retaining the heat engendered in the room, thus giving a warmer dwelling.

I shall be pleased to hear from any person who is interested in my investigation into the effect of the absorption of various plastering materials.—Yours, &c.,

King's Lynn. J. H. KERNER-GREENWOOD.

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Monthly Review of Books and Periodicals.



BALL ROOM IN HOUSE OF JOHN R. McLEAN, WASHINGTON. JOHN RUSSELL POPE, ARCHITECT.
From the "American Architect."

Our Architectural Papers.

The Architectural Review.

The "Architectural Review" for October is one of the finest numbers which have been issued. Bradford-on-Avon is illustrated by an exquisite series of reproductions of pencil drawings by Harold Falker. Two of these, The Shambles, Bradford-on-Avon, and the Town Bridge, are gems of architectural draughtsmanship. H. S. Goodhart Rendel gives the third article of his series on the Churches of Brighton and Hove, which prove how much architectural merit is to be found in some of our modern towns if it is only searched for diligently. The remainder of the number is chiefly taken up by reviews of current books.

The Architect's and Builder's Journal.

The illustrations of "The Architect's and Builder's Journal" are as usual excellent in quality and well chosen. The series of monuments constitute a valuable record, and nothing could be better than the well-produced series of details of craftsmanship. Among its illustrations of contemporary work, the remodelling of the old Town Hall at Cape Town to form the Michaelis Art Gallery should be specially noted; the formal garden in connection with it is a well-considered feature. The text matter, which is usually terse and well selected, would be improved by headings, which would enable the reader to see at a glance subject matter in which he was specially interested.

The Architectural Journal.

The "Journal of the Royal Institute" contains an interesting article by Professor Charles H. Moore on the "Demolition of Soissons" and various notices of current books, together with an announcement of the forthcoming publication in book form of a selection of the premiated cottage designs in the recent Cottage Competition. This, as we have said, has done more to solve the problem which must be dealt with on other and broader lines by architects, unless they are willing that its solution should be taken out of the hands of the profession, as other important branches of architectural design have been in the past.

The Builder.

"The Builder" has illustrated the fine scheme which Mr. Edwards, the City architect of Sheffield, prepared in conjunction with Norman Shaw, for the Bradford Town Hall extension, a scheme which shows how dignified a picturesque treatment may be. It has also illustrated several more of the R.I.B.A. cottage designs, which, we believe, will have been found to have contributed little to the solution of the so-called housing question. It has given Professor Lethaby's thoughtful paper on a National Architecture and other matters of interest in its month's numbers.

The Building News.

During the last month "The Building News" has illustrated many of the Gretna and Eastriggs buildings, the St. Mary Axe Branch of the London County Westminster and Parr's Bank by Hall Jones, and some smaller work, including the very pleasing design for the rebuilding of the Messenger Inn shown in this year's Academy exhibition. Its notes are very well written, and are marked by a wholesome distrust of the everlasting Government meddling with the affairs of private individuals which we have unfortunately become used to. We trust that the common sense of the community will put a check to these before long; if not, the commercial sense of the community on which we have prided ourselves will be to blame. "The Building News" has also given some useful practical articles on concrete.

The Journal of the Society of Architects.

From the October number of the "Journal of the Society of Architects" we give the following passages:—

It would seem from some of the questions put to the witnesses who have given evidence before the R.I.B.A. Committee that the Committee had already come to the following conclusions and merely invited opinions as to procedure:—

That the profession is in an unsatisfactory state and that remedial measures are necessary.

That there are certain minimum essential acquirements for ordinary general practice, and that architectural education should be modified to meet these.

That the R.I.B.A. should be reorganised.

That the profession is not unified.

That there are unqualified practitioners who bring the profession into disrepute, and that they should be prevented from doing so.

That architects should acquire technical and special knowledge and that their education should be improved for this purpose, and that there should be some relationship between architects and technical experts.

That the public are inclined to employ builders in preference to architects.

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The Committee appears to have an open mind on the following subjects:—

(*a*) Whether an attempt should be made to unify the profession and if so in what manner and to what extent.

(*b*) Whether architects should undertake building operations directly.

(*c*) What should be the relations of the profession to the State and to municipal and public departments generally.

If any report of the evidence is to be published, its weight and value will materially depend, in our opinion, on the discrimination shown in selecting witnesses and as to whether any published evidence is in the nature of considered opinions or merely relates to questions put to them in Committee.

We have in mind the fact that most of the published questions are in the nature of problems requiring time for thought on the part of any responsible witness before committing himself to any definite opinion or proposal.

The "Journal's" other contents include an interesting article on a South African Registration Bill for Architects, Data for Cottage Building, Building after the War, and other matters.

American Architectural Papers.

The American Architect.

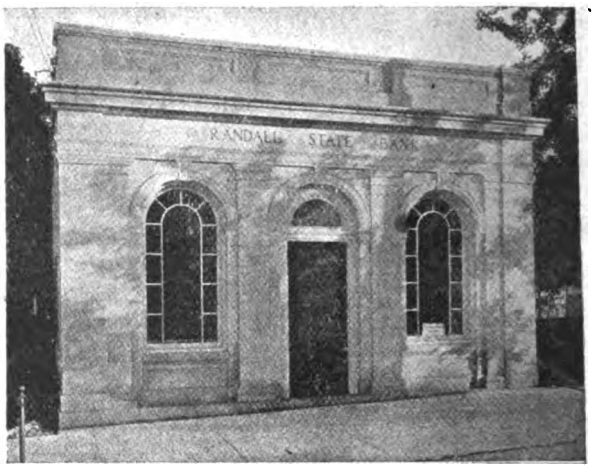
From the issues of the "American Architect" for the last month we reproduce two small Bank designs, both expressive of dignified solidity and reticence as applied to small buildings. We also illustrate two examples of the work of John Russell Pope, a top-lighted ball-room and the end of a conservatory, both of them interesting examples of design. Among the larger buildings illustrated during the month one of the chief is the Fourth Church of Christ Scientist in New York, a simple and good design founded on the Greek manner. Professional ethics are apparently occupying the thoughts of our comrades on the other side of the seas, but all comes down to this in the end, that most of us do what it seems to us to be advantageous to do at the moment, if it involves no unfairness to others.

The Journal of the American Institute of Architects.

The September number of the "Journal" contains an article the writer of which says the world is full of men who can tell us how to do things, but is in need of men who can tell it what to do. It states that when everything produced or consumed has, as now, to be studied in relation to the production and consumption of the world, it indicates that the first step has been taken to plan for a method of production and conservation which is not based on the idea of making a profit. The writer urges that a general world plan is required, but to build it up we must first have national plans, "the country is planned and arranged by men who know how to do things and care nothing about what to do." "Atlantic Heights," a pleasing Government settlement, is fully illustrated. Articles are given on Avila by Georgiana Goddard King, while a rather scathing review on "Beyond Architecture, a Brief Record of Progress in the Government's War Housing Programme," and a short article on "War and the Building Industry," complete the number. The references to the effect of war on building are quaint as they appear to assume its long continuance—as we might three years ago. Now that war conditions are bound shortly to be past history, the most immediate problems seem to be those connected with the early advent of Peace.

The Architectural Forum.

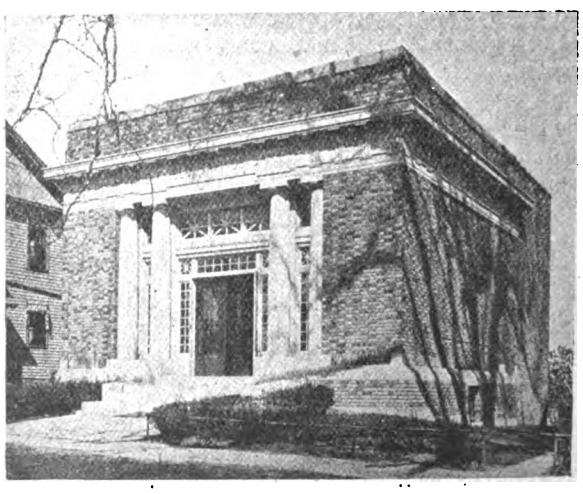
THE "Architectural Forum" for August contains an article on Architects' Fees and Contracts. Several ingenious alternatives to charging by percentage on the amount expended are discussed. First, charging a sum of from three to four times the amount of the architect's actual expenses. Second, charging a percentage on the estimated, and not the executed, cost. Third, charging a fixed fee for the architect's personal services with additions to cover his office expenses. We are informed that all these methods are practised in America, but should think that it matters little which system is adopted and matters infinitely whether the architect and his client are reasonable and honest men. In the remainder of the article the vexed question of supervision, which certainly needs more defining, and other matters are discussed. We certainly ought to come to a definite settlement of what the architect can and should be held responsible for, and what is beyond his reasonable control. An article on the office of Perkins, Fellows and Hamilton of Chicago leaves us with the wish that we had as much to organise. Among the works illustrated are the Indianapolis Public Library and a very simple and pleasing Laboratory building by McKim, Meade, and White in the Botanic Gardens at Brooklyn.



RANDALL STATE BANK, MADISON, WIS.
JAMES RICHARD RAW, Architect.
From the "American Architect."

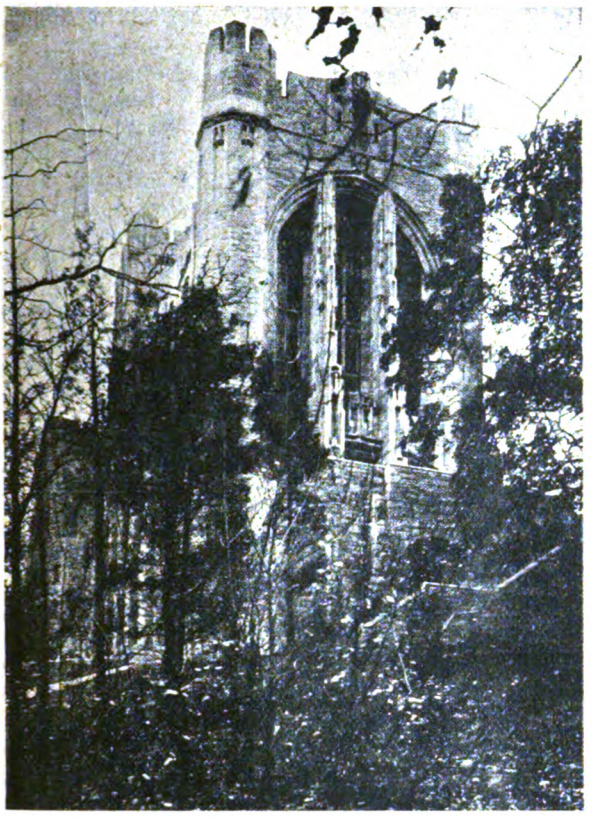
The Architectural Record.

"The Architectural Record" contains articles on the Small House as illustrated in the work of Bolinard & Parsson, the Office Building of the Department of the Interior at Washington, Homes for War Workers, Two New England Libraries, Architecture and Democracy Before, During, and After the War, and an article on English Architectural Decoration by A. E. Bullock. From its pages we give a very pleasing example of quiet and refined design, the main Reading Room of the Bailey Memorial Library at Medfield, Mass., a building carried out in the Colonial manner very delicately detailed. We wish our architects would more frequently incorporate the invariable American feature of a good-sized cupboard in every bedroom. Generally speaking, it is chiefly in this and the provision of more convenient fittings and central heating that we have much to learn from American domestic design.

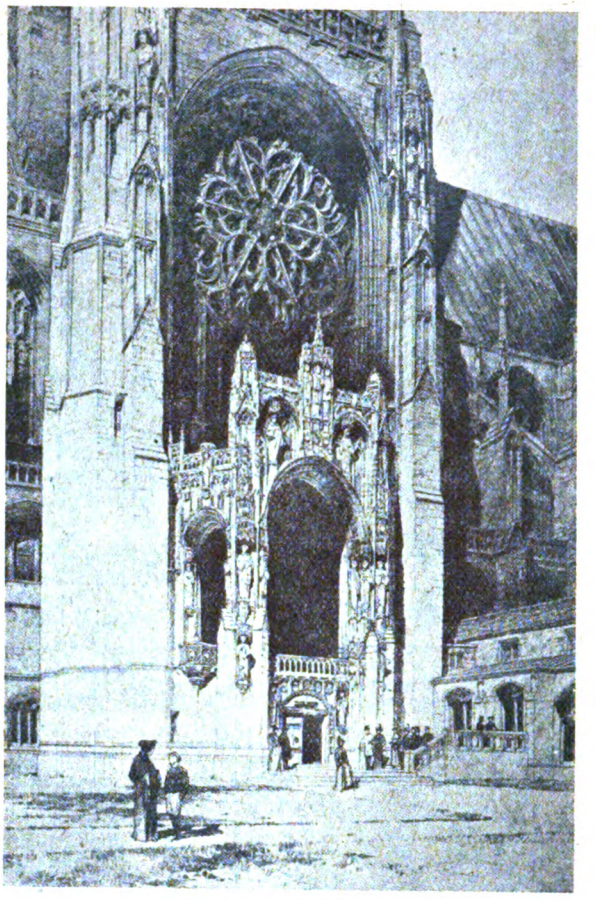


SUFFIELD SAVINGS BANK, SUFFIELD, CONN.
WALTER CRABTREE, Architect.
From the "American Architect."

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CHAPEL OF THE U.S. MILITARY ACADEMY, WEST POINT
CRAM, GOODHUE & FERGUSON, Architects.
From "American Churches."



SOUTH PORCH AND OPEN-AIR PULPIT, CATHEDRAL OF THE INCARNATION, BALTIMORE.
CRAM, GOODHUE & FERGUSON, Architects.
From "American Churches."

Art Publications.

The Burlington Magazine.

The contents of the last number of the magazine include articles on Jan Lys by Tancred Borensius; Early Dutch Maiolica and its English kindred by Bernard Rackham; the third section on Illustrated Books of Japan, by Major S. J. O'Brien Sexton; a most interesting article on English furniture of the Cabriole period by H. Avray Tipping; and some notes on Dürer portraits by Sir Martin Conway.

Eric Gill contributes an interesting article on Religion and Art, in which he says "the prevailing government is irreligious and hedonist, and while this is the case the absolute values of beauty, goodness, and truth must give way to the relative values of loveliness, good manners, and agnosticism; and poverty, chastity, and obedience, the essential bases of good life and good government, must be supplanted by ideals of riches, pleasure, and pride." Mr. Gill is always interesting, though we cannot always agree with him, but we do agree emphatically with his statement that the Art of India cannot be judged by post-Renaissance standards, and conversely the Art of Modern Europe cannot be appraised by the application of Indian standards.

Colour.

"Colour" gives a reproduction of the fine portrait of H. A. Barker by Augustus John; a view of the Cloth Hall at Ypres, by Lieut. Alfred Bastien, which will form a part of the Canadian War Memorial; Concrete German Gun Emplacement, by Maurice Wageman, a part of the same series, and a very pleasing piece of colour fancy entitled "Red Lacquer Dream," by J. Hancock.

The Connoisseur.

"The Connoisseur" for October contains the second part of a most interesting account of Mr. Francis Wellesley's Collection of Miniatures and Drawings by Dr. G. C. Williamson, which is admirably illustrated. P. H. Ditchfield, M.A., F.S.A., writes on cottage curios in Berkshire, and Oliver Brackett on English wall-papers of the eighteenth century.

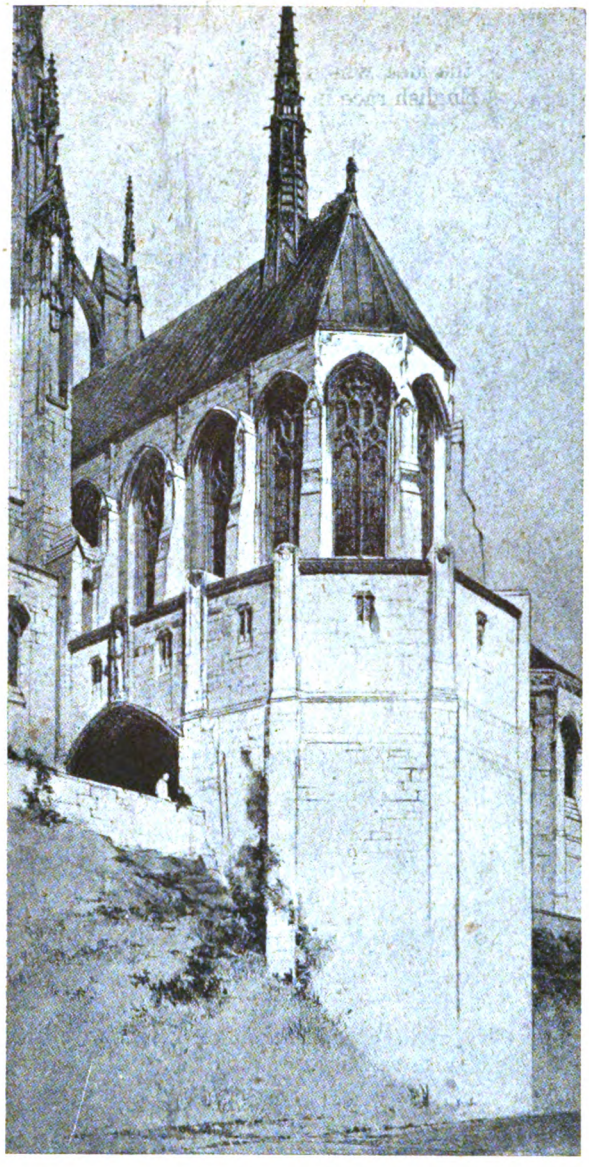
Country Life.

Sledmere, Yorkshire, the seat of Sir Mark Sykes, showing the fine work caried out by Mr. Brierley of York, is illustrated in the first two numbers of the month, and Sudbrook House and Denny, Sussex, in the third week's number, while in the last week of the month illustrations are given of Ormesley Lodge and Petersham House at Petersham with their fine Georgian ironwork. Some excellent drawings are also given with an article on the Conquest of Palestine which have been made by Mr. James McBey the Official British Artist in Palestine, while some very interesting views of Laon illustrate an article entitled Seeking Peace with Fire and Pillage. "Country Life" is doing a useful work by obtaining articles on land and housing from writers whose views are not tinged by political opportunism. In an article on the Ownership and Tenancy of Land, after remarking that the yield on trustee investments has presented inducement to owners to sell their land, it states: "The consequence is an increased volume of land in the market, and the eagerness with which it is bought has tempted owners to swell the stream which is now strong and steady and shows no signs of diminution. It is certain that, come what may, the farmer is more certain of an adequate return on his skill, energy and capital than ever before." A wise conservatism may in fact give us what we want despite the more heroic measures of politicians who know little of the land.

The Studio.

"The Studio" contains articles on the recent work of Mr. H. Hughes Stanton, A.R.A., one on Six Etchings by Lester G. Homby; the finest of these is an admirably spirited landscape entitled "Ciel Pluvieux, Sailly, Marne;" an article on the Flower Painting of Herbert Davis Richter, R.O.I.; and some smaller items dealing with recent additions to the Dublin Municipal Gallery under the Lane Bequest. One of these, entitled "The Straw Hat," by William Maris, is particularly charming.

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MORNING CHAPEL IN CATHEDRAL OF THE INCARNATION, BALTIMORE.—BERTRAM GROSVENOR GOODHUE, Architect.

Books.

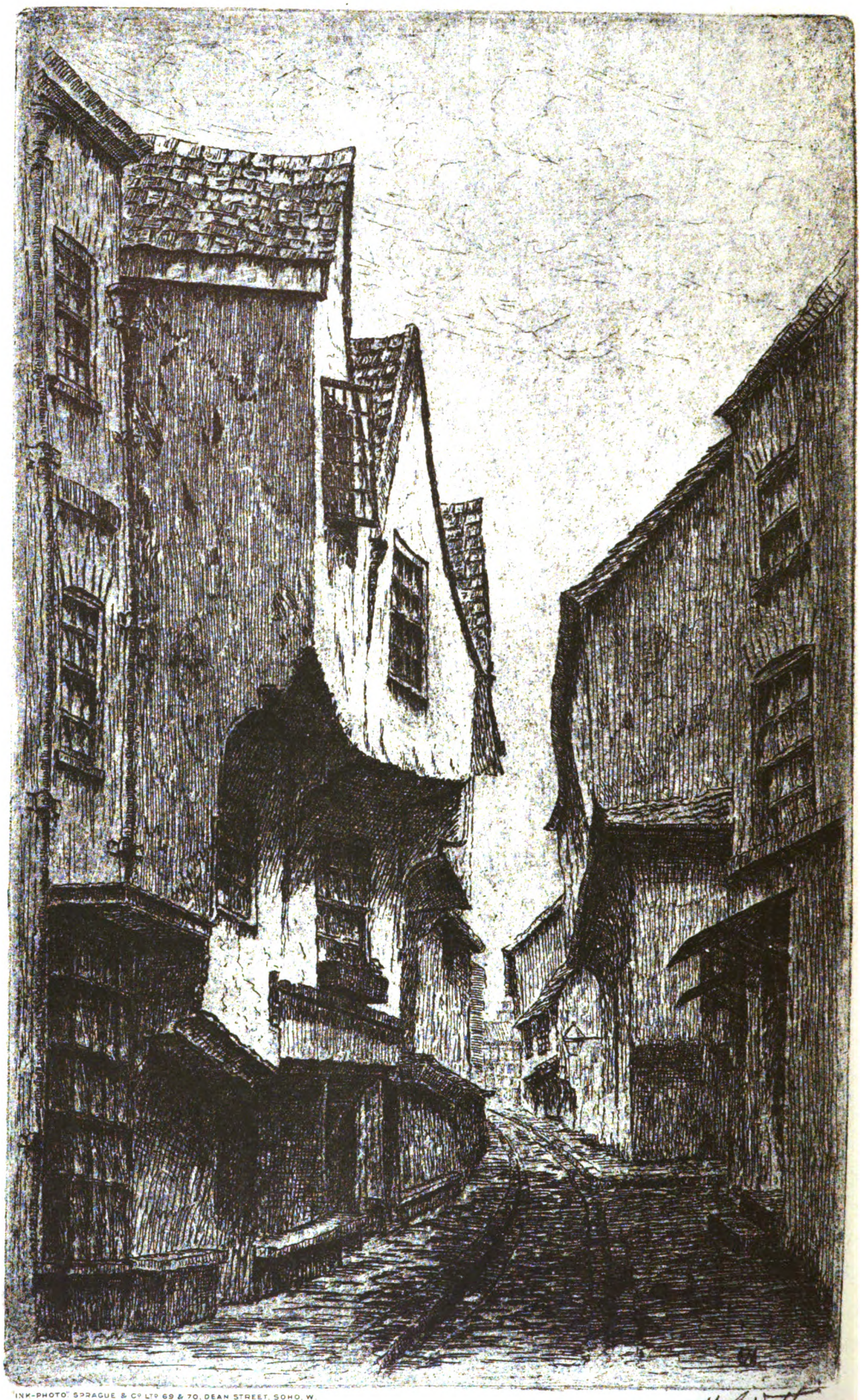
"American Churches," being a series of authoritative articles on the Designing, Planning, Heating, Ventilation, Lighting and General Equipment of Churches as demonstrated by the Best Practice in the United States. With an introduction by Ralph Adams Cram. New York: The American Architect. In two volumes. [B. T. Batsford, English agents, £3 net.]

THIS work affords a remarkable summary of what has been done by our cousins in a great field of design which we are a little too ready to assume we lead. The first volume is illustrated by a large number of examples of the work of various architects, including those in the Boston office of Cram, Goodhue and Ferguson. The second volume is exclusively given up to the work produced in the New York office of Cram, Goodhue and Ferguson, in which we trace the individuality of that master of Gothic expression, Bertram Grosvenor Goodhue, who more than almost any single man in the modern world seems to have a spirit of divination which has enabled him to acquire the living fire and force which distinguishes the best medieval work. The best of the work shown in the first volume is some which follows the traditional Colonial models like the First Congregational Church at Danbury, Conn., by Howell and Stokes, a dignified and simple variant on Colonial lines; the attenuation of the columns of the portico, indeed, suggest a wooden origin. It is clearer cut and more refined than much of our corresponding Georgian design. Such an essay as the First Congregational Church, Riverside, California, by Myrom Hunt, is also interesting and a good example of work founded on the precedent of the Spanish Mission architecture in California. Several examples of the work of Henry Vaughan are given in this volume. Vaughan was chief assistant to Bodley and Garner and brought with him to America wide and accurate knowledge of the best school of English ecclesiastical design. Unfortunately he also brought with him an unflinching conservatism and contempt for anything un-English. Because of the broadmindedness which distinguishes the attitude of the best Americans, Vaughan made a great success in America despite an aloofness which made him a hermit in an alien surrounding. The soundness of his work and its sterling merit had their effect on the church designs of a country in which no medieval work exists to set a standard which influenced the later developments of American ecclesiastical architecture. Vaughan's work was exeellent, correct but cold and a little formal; perhaps the best of that illustrated is the interior of the Chapel of Western Reserve University, Cleveland, O., which might pass for the work of the master he venerated in what he would have termed his "exile." Much of the work shown in the first volume, like that of the Bethany Memorial Church, New York, by Nelson and Van Wagenen, is Gothic only in name, like a great mass of our Nonconformist buildings in which Gothic forms are linked uneasily with modern construction. In the work of the Boston office of Cram, Goodhue and Ferguson we get examples of exquisite detail like the Reredos of St. Paul's Cathedral at Detroit and the Bishop's Throne in the same building, which show the mastery of detail of a great designer, but the best work of the firm is given in the second volume. We give reproductions of the magnificent chapel erected at West Point, a building in which the best traditions of a great art have been planted in the soil of a new continent and which proves that Gothic art is alive in the hands of a few masters six hundred years after the century which saw its birth. None of our great Gothic churches are more devoid of meretricious tricks than this is, and, as is proved by a large number of illustrations, every detail is an example of Goodhue's power of absorbing and expressing the meaning of Gothic tradition. The front of the Chapel of the Intercession, which we also illustrate, shows a similar delicacy of perception and power of expression. It is as if a great medieval designer had returned to the later world and taken up a work which death has cut short. A yet more elaborate rendering of Gothic design is evidenced in the wonderful drawings of the South Porch and Open-Air Pulpit of the Cathedral of the Incarnation at Baltimore, the North Porch of the same Church and its Morning Chapel. This design is not yet executed, but it is abundantly clear from the quality of the executed work shown that Goodhue's ability will give Baltimore one of the most beautiful of the world's greatest churches. In the Porch of the Pro-Cathedral, Havana, Cuba, we have an admirable example of the designer's versatility and mastery of an elaborate and florid type of Renaissance, and the Reredos in the same church shows the same power. Space will not permit us to do more than briefly refer to the text which contains a series of articles dealing with the design of every part and detail of a church, while William H. Goodyear has contributed a section dealing with medieval refinements, a subject he has made his own. Opinions on this question are as yet divided, but much may be proved by the experiments which are being made in actual practice by R. M. Butler and other designers. If we find we can produce effects which suggest some of the charm we find in work of the past we should have less hesitation in accepting the theory that the medieval designers who knew so much had penetrated a secret which has been hitherto concealed from us.

We can recommend this book to those who in this country are interested in church design, for we have never come across a more practical and thoughtful compilation on the subject, while Goodhue's work shows us the fallacy of assuming that any style can be said to belong exclusively to the past or is suitable only for

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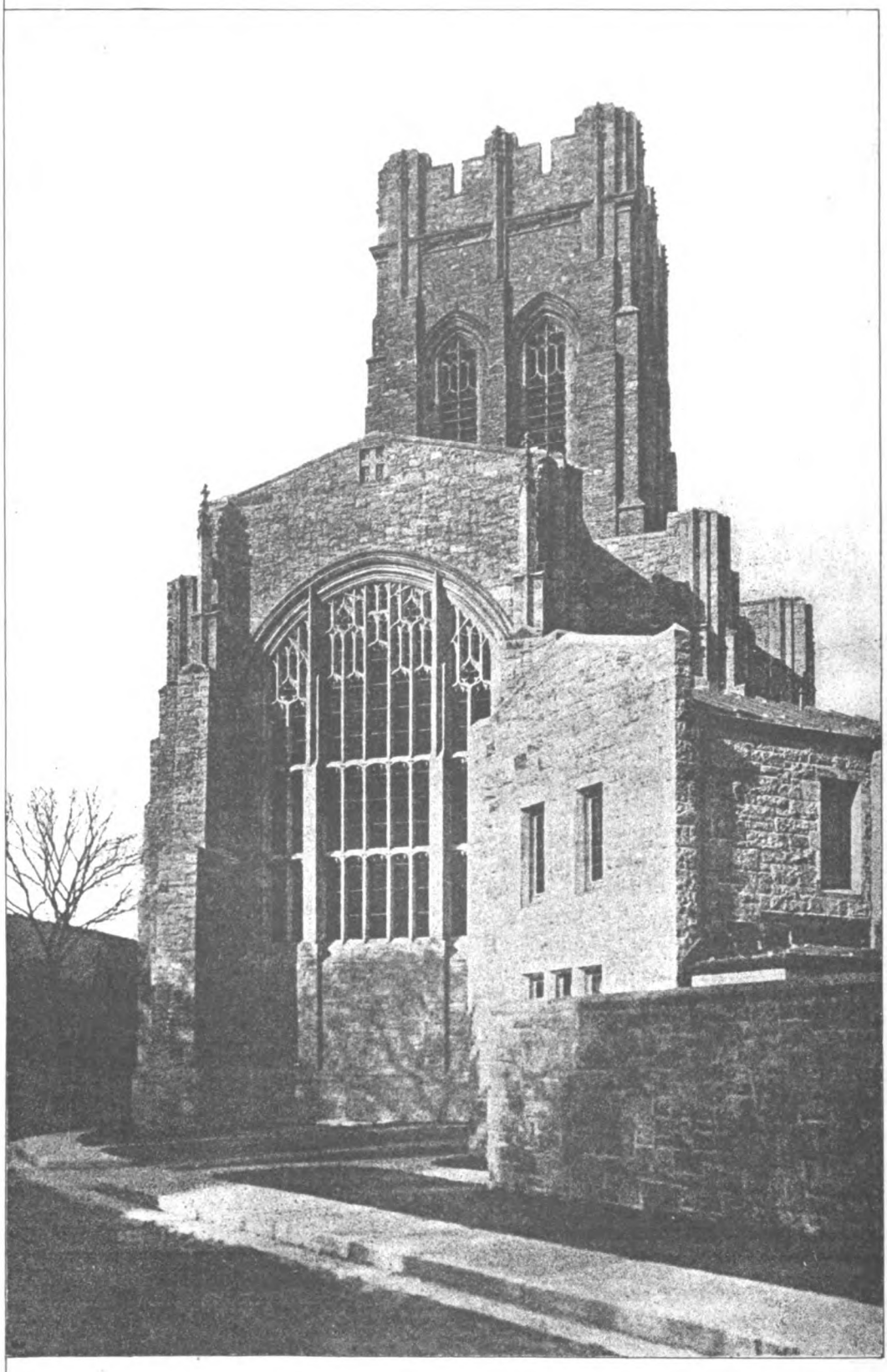


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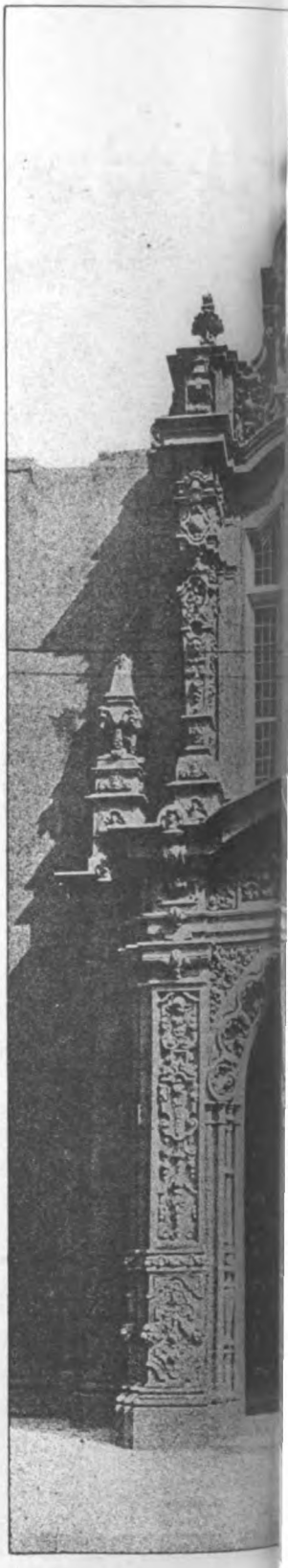
THE SHAMBLES, YORK.

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CHAPEL OF THE UNITED STATES MILITARY ACADEMY, WEST POINT, N.Y.

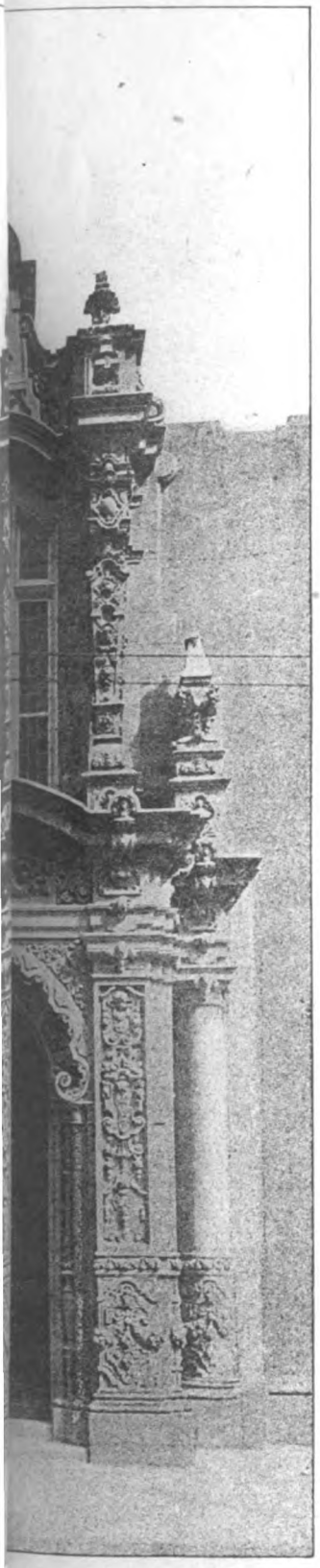


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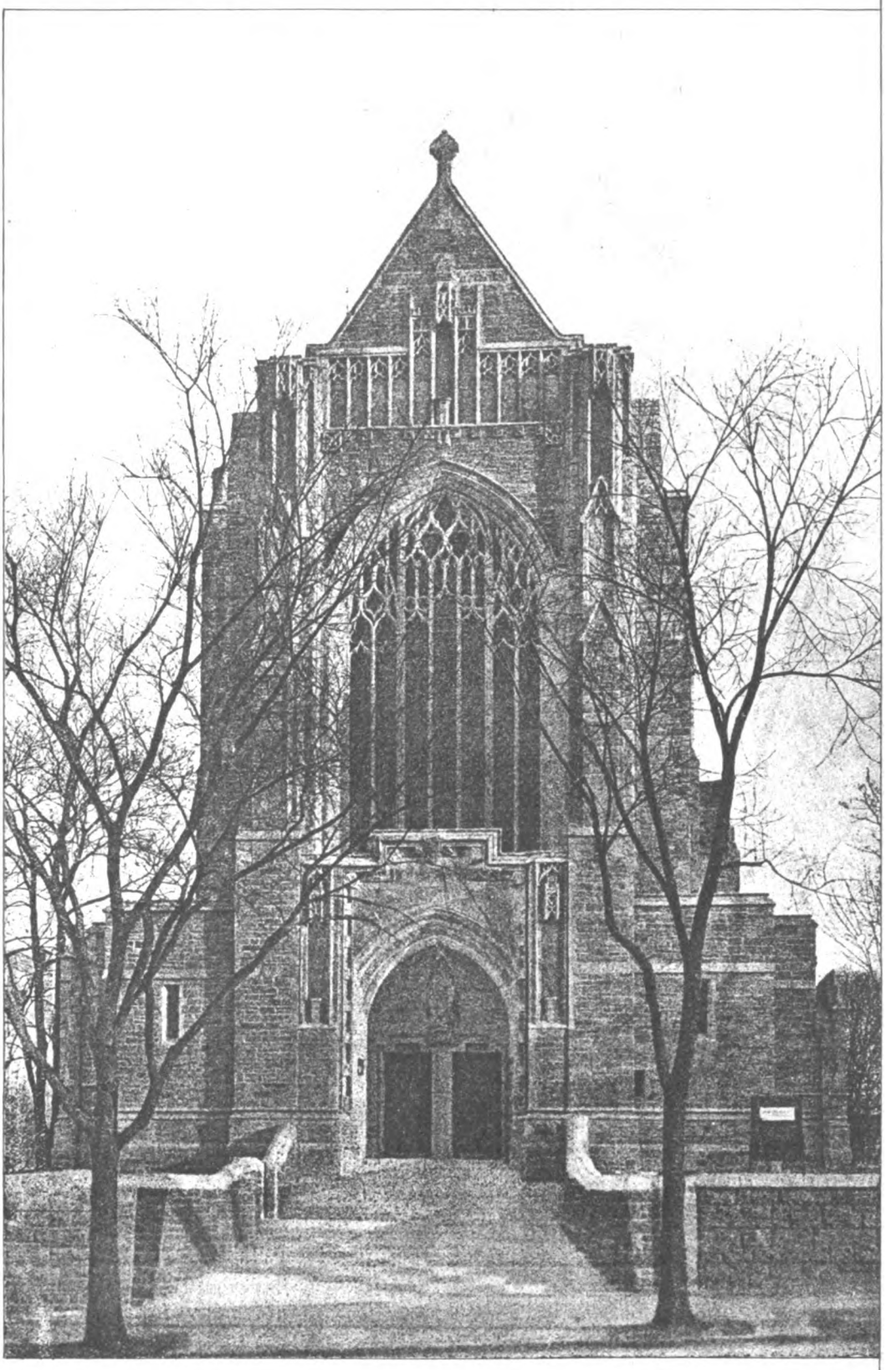
ILLUSTRATING SOME OF THE CHURCH WORK
BY JAMES McFARLAN BAKER, M.S. P.

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Nov. 1st 1918.



AVANA, CUBA.



CHAPEL OF THE INTERCESSION, NEW YORK.

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ICHUE AND FERGUSON FROM AMERICAN CHURCHES
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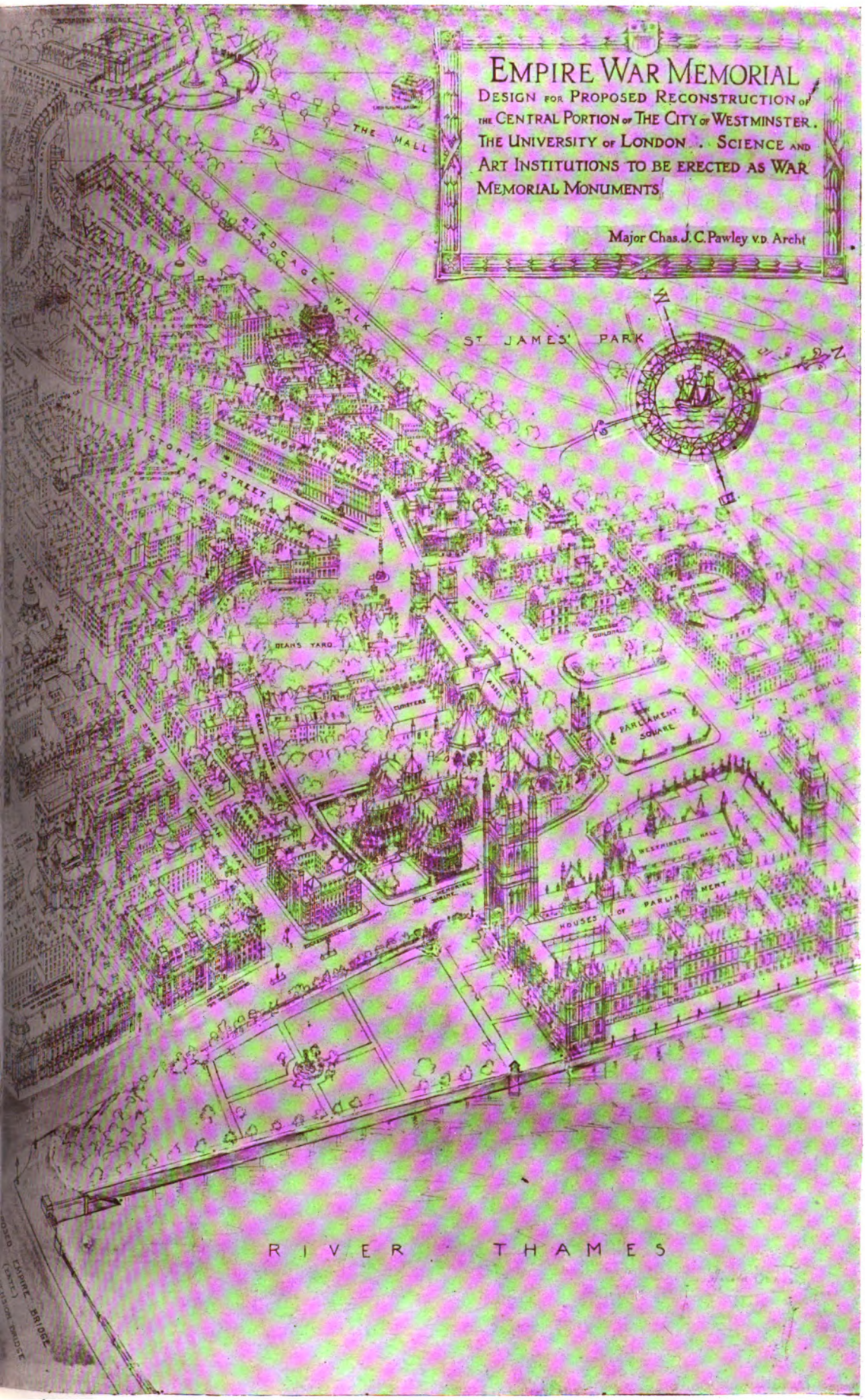
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BIRD'S-EYE VIEW, SHOWING MAJOR CHAS. J. C. P.

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EY'S SCHEME FOR AN EMPIRE WAR MEMORIAL.

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INK-PHOTO. SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

H. E. Webb

MERCERY LANE, CANTERBURY.

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the solution of problems which no longer exist. The work of any great designer is valuable to the world, not only for what it is, but what it inspires in others, and Goodhue may be described as a carrier of the living torch of great design.

"A History of Everyday Things in England. Done in Two Parts, of which this is the first. 1066-1499." Written and illustrated by Marjorie and C. H. B. Quennell. (B. T. Batsford, Ltd. 8*s*. 6*d*. net.)

MANY things have been made possible by the war, and probably by the war alone. It is doubtful whether in ordinary times Mr. and Mrs. Quennell would have ever found time to compile this book, and they would have missed what has evidently been a work of love, while the children of England would have been without a key to unlock the mysteries of past centuries of which we are too often the ignorant heritors. Green revolutionised the study of history by attracting our attention away from dull episodes in the life of rulers, who were in most cases the creatures of destiny bound to move in accordance with the surge and tide of great historical movements, creatures of circumstance rather than arbiters of destiny. In the same way in the "History of Everyday Things" children will learn to understand that the magic world of the past was as natural as the one they live in, and its apparent wonders are as easily explicable as those in the world in which they move. The stage was changed and altered with the progress of time; the initial impulses and aims of the actors remain what they always were. There is no bar which prevents us from understanding the past but that of ignorance, no myths except those which have been built up by the want of sympathy of writers complacently absorbed in the contemplation of the present, while the citizens of the future can be best made from those who have the fullest understanding of and sympathy with the development of the past.

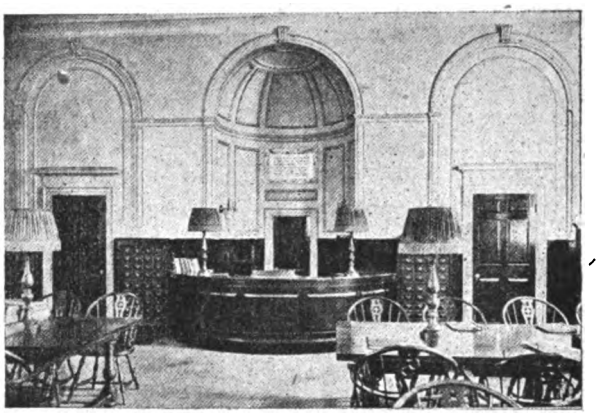
The writers of this book have done a great service to the cause of architecture, for it cannot fail to attract interest to, and concentrate attention upon, the one permanent record which has come down to us from past ages; but this record is one which is largely unmeaning unless we are taught to read it in terms based on the usages of former ages. Our castles and cathedrals may be a sealed book to those who have never thought in intimate terms of the way in which they were used centuries ago. A book like this makes the child understand that our forefathers, like ourselves, took the readiest and directest methods to satisfy wants which differed from ours, and every part of church, castle, or manor house was built with a directly practical object. The child may be misled by the unconscious mannerism of old drawings, but it is impossible to be misled or to misunderstand the admirable living drawings with which this book is illustrated. The descriptive text is excellent. What could, for instance, be better than the following?—

"As we go through the centuries, we shall find that each one seems to have had a character of its own, and that the thoughts and feelings of the people are reflected in the things which they have left behind them. In the twelfth century, with which we have dealt in the last chapter, the general impression is that of rugged strength. The Normans were like their own castles; and even their cathedrals, beautiful as they are, echo the same feeling. Henry of Huntingdon, an historian of the time, said, 'For God had chosen the Normans for the extirpation of the English race, because He saw that they excelled all people in the quality of unrivalled savagery.' And William of Malmesbury, talking of the Saxons before the Conquest, said, 'The custom of drinking together was universal, the night as well as the day being spent in its pursuit. They expended great sums while living in small and contemptible dwellings; unlike the Normans, who live at a moderate rate in large and splendid buildings.'"

And again, "One should think of Westminster Abbey not as a building put up by Henry III., who though he was a bad king was a good builder, but rather as being symbolical of the ideals of a whole people moving slowly towards freedom and justice—with many set-backs, but yet moving forward." In a sentence, this conveys to the child the idea which would be put to an older reader by "the English race has never moved forward in accordance with a logical and consistently thought out plan, but circumstances have governed the destinies of the race, with the result that it has achieved the utmost freedom compatible with the maintenance of order and good government." The crux of our difficulties in the future is that we may attempt to substitute for a process which has been automatic and beneficial a philosophical and doctrinaire control which will defeat the aims we should have in view.

Our history is one of the mistakes of Governments which have been powerless to stop the general progress of the people, our law is based not on codes but on a slowly developing chain of precedents, and it is therefore from the study of the lives and customs of the past that we can get nearest to an understanding of what is vital and necessary in the future. The worst thing that could happen is that we should learn to be forgetful of the past in relation to the history of our country, and such a book as this will be valuable to future generations if it teaches them to understand the sequence of history and its bearing on our lives.

The illustrations with which the book is amply furnished are excellent in quality and varied in subject. Mr. and Mrs. Quennell have given us no indication of the division of labour which has resulted in the work, so that it is impossible for us to refer to or compare their work. Were we to do so we should probably make a similar mistake to that of the critics in "Middlemarch," when Fred Viney and his wife each wrote a book which critics attributed to the wrong sources. All we need say is that we congratulate both the authors on an exceedingly well thought out and admirably produced book, which we believe we may find from time to time in the hands of older children than those for whom it is primarily written.



MAIN READING ROOM, MEMORIAL PUBLIC LIBRARY, MEDFIELD, MASS.
WILLIAM G. PERRY, Architect.
From the "Architectural Record."

MR. J. T. CULLEN, M.R.I.A.I., of 25 Suffolk Street, Dublin, is the architect for the new church to be erected at Athlone for the Franciscan Order at an estimated cost of £50,000.

THE fifty-second annual meeting of the Liverpool Master Builders' Association took place last week at the offices of the association, 24 Sir Thomas Street, Liverpool. The chair was occupied in the early stages by the retiring president (Mr. G. H. Morton). The annual report, showing a large amount of important work carried out, was adopted, also the treasurer's statement of accounts. Mr. Thomas Jones, of 38 Mount Pleasant, Liverpool, was elected president for the ensuing year, a vote of thanks being passed to the retiring president for his services during the past year. The following officers were elected:—Mr. George Platt, senior vice-president; Mr. W. F. Thornton, junior vice-president; Mr. Thomas W. Stubbs, hon. treasurer (re-elected); Mr. J. Sirett Brown and Mr. Henry Lever, hon. auditors. The following trade committees were elected:—Bricklayers' Committee, Masons' Committee, Slaters' and Plasterers' Committee, Joiners' Committee, and Plumbers' and Painters' Committee.

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THE LATE ROBERT WILLIAMS, F.R.I.B.A.

By One who Knew Him.

It is with sincere regret that we announce the death of an old and valued friend of this Journal, Robert Williams, F.R.I.B.A., of Cairo, Egypt, Hook, Hants, and 10 Clifford's Inn, London, E.C., who passed away on October 16, at Cairo, after a severe attack of Spanish influenza, at the age of 70.

Robert Williams was born at Ystradewen, Glamorgan in the year 1848, and after an early training in building construction, served and studied under Mr. St. Aubyn.

He became an A.R.I.B.A. in the year 1887, and was elected a Fellow in 1896. During his residence in England he took a keen interest in all questions affecting the health and well-being of the community, particularly of those closely connected with the working classes. For some years he was a Member of the London County Council, sitting for North Lambeth, and serving on the Workmen's National Housing Council, where his earnest work, his untiring energy and his persistent advocacy of better housing for the working classes, secured many friends and the respect and regard of those who did not always agree with him.

Mr. Robert Williams was a writer of considerable merit; strong, forceful and descriptive. Among the many books and pamphlets written by him were several technical works in French, Arabic, and others, emphasising his democratic outlook on such subjects as "More Light and Air for Londoners," "Colliers, Slums, and London Rookeries," "The Labourer and his Cottage," &c. He leaves behind a record of unblemished honour and integrity and a large circle of friends of all descriptions, many in the humblest walks of life.

We mention a few of the principal works carried out from his designs, the majority of which have been illustrated in *The Architect*.

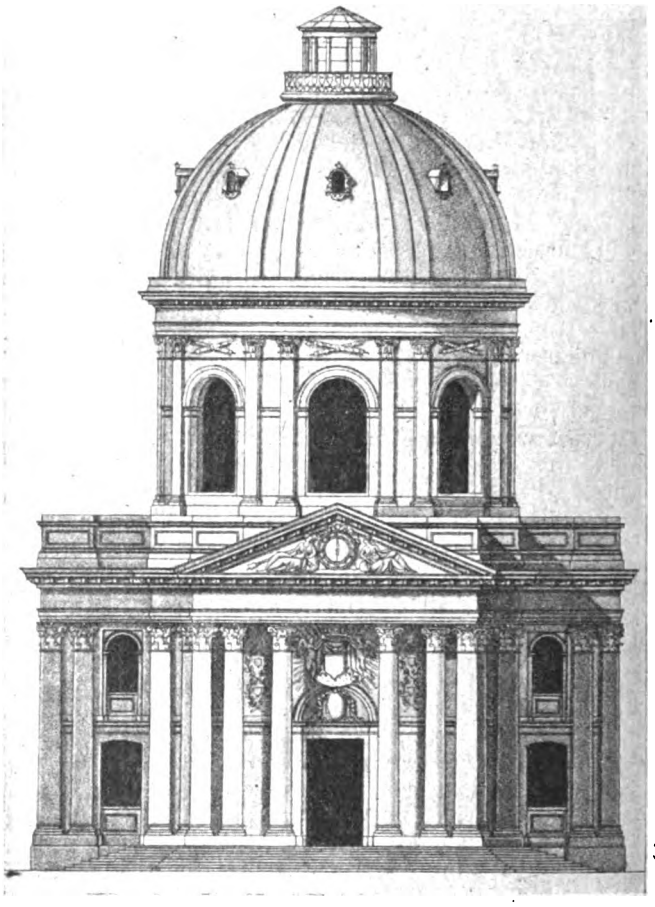
Market Hall and Buildings, Pontypool, General Hospital, Pontypool, Intermediate School, Cambridge, The Wheatsheaf Hall, London, The Lewisham Asylum, London.

During the past sixteen years he has been engaged in Egypt, among the building operations carried through there being: Anglo-Egyptian Banks at Port Said and Tanta, The Bible House, Port Said, The Davies Bryan (St. Davids) Buildings, Alexandria and Cairo, The Marconi Tower Insulation, Cairo, The Soldiers' Home, Cairo, &c.

He was called into consultation at various times by the Egyptian Government, especially to report as to the stability of the Nile Dam at Assouan, Upper Egypt. In 1916 and 1917 he joined the Yale and Harvard Exploration Expedition to Upper Egypt, which resulted in important discoveries.

One of the last letters received from him to the writer of these notes was full of vitality, the almost youthful vitality which characterised the man, even in his writing. After a few words of almost seemingly fulsome flattery on the conduct of this Journal during the war (but for the fact that Robert Williams never lent himself to anything of the sort, this tribute was all the more valued), he goes on to state: "Well, my friend, this is a wonderful nation of ours, stupid to a degree in many things, careless, blundering, but under all with magnificent courage, dogged resolution, and untiring energy when once aroused. No wonder we are the envy of other nations, and respected, and feared by the Oriental, and with all this loved by him. It makes one proud to be a Britisher." In closing his letter he stated "and now I do want to be of service to my fellow members of the profession. There are many young men of the architectural profession who will probably be in Egypt. I shall be so glad to be of service to them, there are many pitfalls in this interesting country, but much to learn, much to broaden one's view of life, and to help one to get a proper perspective of life as it is, all so needful for the practice of architecture of which profession I am proud to be a humble member." Such was the man Robert Williams, to those privileged to know him, a man, whatever his age, who, to the day of his death, would remain a young man, with all the experience of a long life, but retaining to the end a youthful optimistic outlook.

PARIS IN 1808.



NO. 5.—THE CHURCH OF THE COLLEGE DES QUATRE NATIONS, QUAI CONTE.

This church, which now forms part of the Institute of France, was built by Le Vau for Mazarin in 1660-68. The dome has the peculiarity of being almost circular externally and elliptical internally. The domed space forms the nave and is flanked by two aisles. The choir contains the Cardinal's tomb, and the front bay forms a narthex. Both the external and internal domes are of timber. The church now forms the centre of a remarkably fine architectural composition.

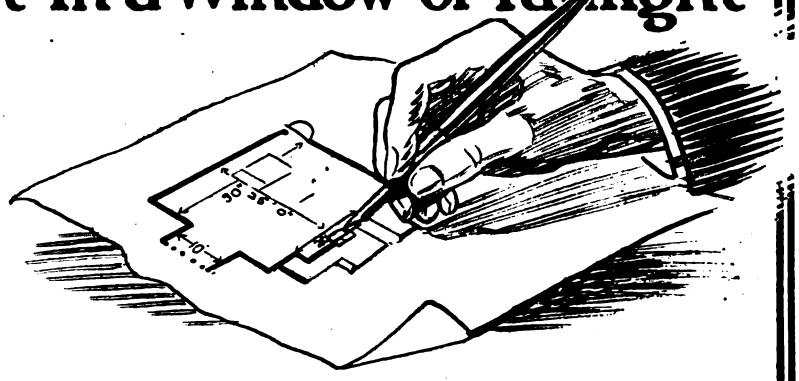
Mr. Richard Richards, secretary of the Newport Master Builders' Association, died suddenly on Sunday evening.

Mr. Henry John Wadling, F.R.I.B.A., surveyor to the Middle Temple, passed away on Saturday last, October 26, at his residence, 148 Camden Road, London, N.W., aged seventy-four.

It has been brought to the notice of the Coal Mines Department by local fuel overseers that many occupiers of flats and offices appear to think that there is no need to send the usual application form to the local fuel overseer unless they use coal. To clear up the misunderstanding, it may be stated that all consumers of more than 22,500 cubic feet of gas or 120 B.T. units of electricity a year have to apply for an assessment, and the forms can be obtained from the gas or electricity undertakings if the consumer does not buy coal. If the flat or office is part of a block where the heating is supplied by the landlord or main occupier, or if the gas or electricity is supplied by a submeter from the general supply to the building, the premises may be decided by the local fuel overseer to be a case for one joint assessment, and occupiers under these conditions should inquire from their landlords in the first instance.

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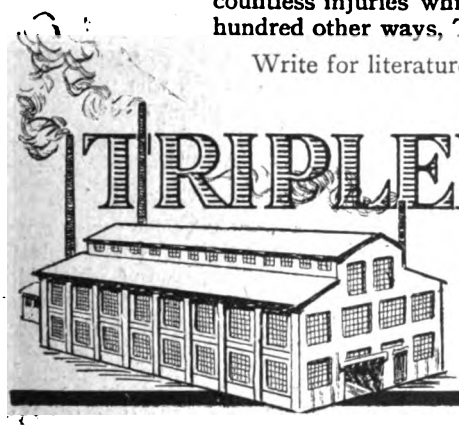
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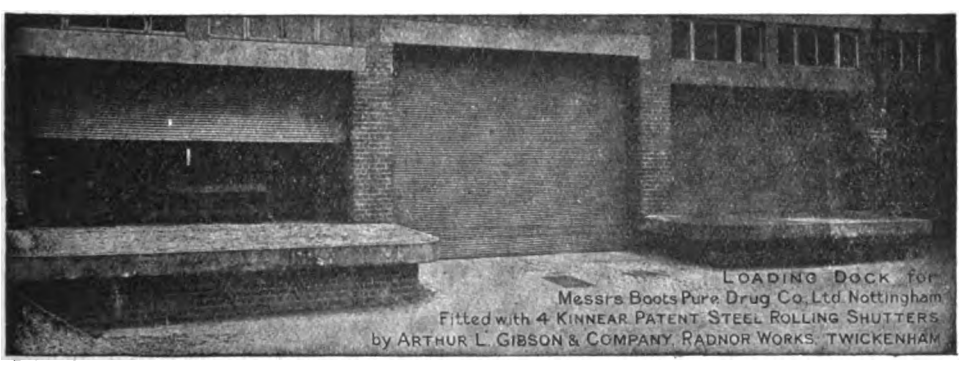
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GENERAL.

REPAIRS are to be carried out to the Bridge of Dee at an estimated cost of £350.

THE death is announced of Mr. John Wittcombe, Curator of the Bath Art Gallery.

THE death is announced as taking place at Wingate, Galashiels, of Mr. William Thomson, the burgh surveyor.

EXTENSIONS are about to be made to the Sailors' Home, Belfast, at an estimated cost of £2,500.

MR. JOHN BIGGIN, contractor, of Hastings Road, Hillhouses, Sheffield, left £15,662.

ENGINEER-LIEUTENANT JAS. B. WOOD, R.N.R., who has fallen in the war, was the youngest son of Mr. John Wood, builder, Galashiels.

ON Thursday last week damage estimated at £40,000 was caused by a fire which broke out at the cocoa factory of Messrs. Payne, Tooley Street, Bermondsey.

A PLOT of land adjoining Ben Rhydding parish church has been purchased at a cost of £300 as a site for a parochial hall.

MAJOR W. H. PRESCOTT, R.E., surveyor to the Tottenham District Council, has been adopted as a parliamentary candidate for the borough of Tottenham.

AN exhibition open until November 18 is being held at Sheffield Mappin Art Gallery of the Civic Surveys of South Yorkshire including Leeds and Bradford.

PRIVATE ALEXANDER S. WATSON, of the Gordons, has fallen in action. Prior to joining up he was articled to Wilson & Walker, architects, Union Street, Aberdeen.

MAJOR JAMES M. HALLEY, F.R.I.B.A., of the Royal Engineers, eldest son of Mr. Joseph Halley, 43 Lawrence Street, Glasgow, was killed in action on October 24.

THE Morecambe Council have decided to abandon their projected water scheme estimated to cost between £100,000 and £150,000. The Morecambe opposition to the Lancaster Water Bill will now be withdrawn.

AT a meeting last week of the Parish Council of Canvey Island a further step was taken in the matter of providing houses under the Rochford Rural Council's scheme. Sites were selected upon which twelve houses are to be erected to serve the neighbouring farms.

BISHOP TAYLOR SMITH, Chaplain-General to the Forces, unveiled a memorial tablet at St. Mark's Church, Kennington, on Friday last, which has been erected by members of the London Fire Brigade to eight of their comrades "killed in the execution of their duty" by the collapse of a wall at the great fire on the Embankment at Vauxhall some months ago.

THE problem of houses for the working classes is becoming acute in Buckie. The Town Council have been considering the matter for some time but no definite decision has yet been reached. The Traders' Association has had the matter under consideration; and at a largely attended meeting, presided over by Mr. George Sutherland, West Church Street, a resolution was unanimously passed urging the Town Council to adopt a scheme to be proceeded with as soon as possible.

AT the annual meeting of the Birmingham Archæological Society held at the Midland Institute on October 23, Mr. John Humphreys, F.S.A., was re-elected president. Mr. Howard S. Pearson read an interesting paper on "William Hamper, F.S.A., 1776-1831." The subject of the lecture was, said Mr. Pearson, the ablest and most accomplished antiquary whom the city could boast, incomparably Hutten's superior. It was now proposed to restore the family monument which stood in King's Norton churchyard (the family being extinct), and donations should be sent to the hon. secretary, Mr. Francis B. Andrews, at the Midland Institute.

EAST Lothian County Council have adopted a report which the Convener's Committee had prepared in response to a communication from the Ministry of Reconstruction, on the subject of rural housing and transit facilities. In regard to improved transit to Edinburgh, the Committee recorded the opinion that it was in the public interest that there should be a new route from near Wallyford to the south side of Edinburgh, so as to get rid of the congestion of traffic and tram lines in the Musselburgh and Portobello districts. It was noted that the Edinburgh authorities had under consideration certain proposals for improvement of road traffic in and around Edinburgh, and it was agreed to communicate with the Edinburgh Corporation and the Midlothian County Council, and suggest a meeting to discuss the matter.

ST. AUSTELL Urban Council met last week, Mr. W. J. Nicholls, J.P., presiding. Having reconsidered the offer to be made to Captain Tremayne for a site of 3½ acres for the erection of workmen's houses after the war, the Chairman reported that the Housing Committee recommended £500 for the whole site, which worked out at £140 per acre. The committee desired it to be pointed out to Captain Tremayne that the object of the Council was to provide houses for the men who had done so much for us in the war, and the hope that he would sympathetically entertain the committee's offer. Councillors Perry, Hancock, Bennett, and Williams thought the offer too high, and accordingly voted against it. The committee's recommendation was carried by one vote.

THE following linings have been passed by the Glasgow Dean of Guild Court:—P. & W. MacLellan, Ltd., to extend shed at 45 East Vermont Street, Kinning Park; Charles Connell & Co., Ltd., shipbuilders, Scotstoun, to erect an electric-power transforming station between South Street and the River Clyde; the Ioco Proofing Co., Ltd., Netherton Works, Anniesland, to erect a garment-making house there; the Glasgow Steel Roofing Co., Ltd., engineers, North-Western Works, Possilpark, to extend machine and erecting shops in Balmore Road; Barclay, Curle & Co., Ltd., shipbuilders and engineers, Whiteinch, to erect buildings in Kelvinhaugh Road, Lymburn Street, and Kelvinhaugh Street; William Beardmore & Co., Ltd., Parkhead Forge, to extend offices in Old Edinburgh Road; Woodside Engineering Co., Ltd., to add to works in Balmore Road, Possilpark; Ferguson & Timpson, Ltd., engineers, to extend engineering shop at 62 Princes Street, Govan.

THE use of iron Portland cement in reinforced concrete was dealt with in a paper read to the West of Scotland Iron and Steel Institute by Mr. E. H. Lewis, who said that his object was to try to remove a groundless prejudice which existed against iron Portland cement, a by-product of the blastfurnace industry. The prejudice was apparently based on the supposed sulphur content of such cements, and on certain failures of concrete where blastfurnace slag had been used as an aggregate. It was true that some cements made from slag were high in sulphur, but it was not logical to assume that all cements in the manufacture of which blastfurnace slag was used were therefore faulty in that respect. In a properly made iron Portland cement there was no difficulty in keeping the sulphur content well below the requirements of the British standard specification. Mr. Lewis gave instances where the use of iron Portland cement had been put to severe tests, and contended that the objections raised against it were unfounded, and that there need be no greater fear of corrosion of steel reinforcing rods in the case of iron Portland cement than in the case of Portland cement.

ON the occasion of a recent visit paid by members of the Greenwich Antiquarian Society to St. George's-in-the-East and Spitalfields, Mr. A. D. Sharp gave an account of the life and work of Nicholas Hawksmoor, the architect of St. Alfege, Greenwich, of the consecration of which the 200th anniversary has recently been celebrated. Nicholas Hawksmoor was scholar and domestic clerk to Sir Christopher Wren, and employed by him on some of his most important buildings, including the palace of King Charles II. at Winchester and St. Paul's Cathedral. He occupied a number of public offices in succession, being deputy surveyor to Chelsea Hospital from 1682 to 1690, clerk of works at Greenwich Hospital from 1698 (for which service he received a salary of 5*s.* a day), and at the same time clerk of works at Kensington Palace. In 1705 he became deputy surveyor at Greenwich and was actively engaged in superintending the building operations till the end of his career some thirty years later. In addition to his work under Wren, he assisted Sir John Vanbrugh in the building of Castle Howard and Blenheim Palace. When a commission was set up in the reign of Queen Anne to erect fifty new churches in the Metropolis Hawksmoor was from the first employed to keep the accounts, and in 1716 succeeded James Gibbs as surveyor. He was responsible for six of the churches actually built, the first being that of St. Alfege, Greenwich, begun in 1711. The others were St. Anne's, Limehouse, the steeple of which forms a conspicuous object in the view from Greenwich Hill; St. George's-in-the-East, famous for the ritual riots of last century; St. Mary Woolnoth, which now stands over the Bank station of the South London Tube; St. George's, Bloomsbury, famous for the statue of King George I., which crowns the steeple; and Christ Church, Spitalfields, which boasts of one of the finest interiors in the City of London. He was also responsible for buildings at All Souls' and Queen's Colleges, Oxford. Personally Hawksmoor was modest and unassuming and not inclined to push himself. He was careful of detail and possessed great mechanical knowledge. As a designer he had neither the imagination of Vanbrugh nor the cultivated taste of Wren, but his buildings are original and vigorous in conception and merit the close study of all interested in English Renaissance architecture.

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THE ARCHITECT AND CONTRACT REPORTER

VOL. C.—2603. NOVEMBER 8, 1918.

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The President of the Institute and His Three Points.

In an excellent inaugural address Mr. Hare enunciated three leading points which the Institute will attempt to secure during his term of office, and which we, in common with the profession with whose name we are identified, will do our utmost to further. Two of these points are purely practical, the third will appeal to the sentiment and the wishes of all of us. We are within a measurable distance of the successful ending of the great war which has been a scourge to European civilisation, but without which it is possible that civilisation might never have achieved what it may attain to within the course of the next few generations, in whose lifetime we may witness the dawn of the brotherhood of the free peoples of Europe, based on justice and respect for national ideals.

Taking these points in order, the first is that the Institute has identified itself with the demand that the authorities should end the war control of building immediately hostilities cease. We know that there may be a shortage of some materials for a brief period of time, but we believe that the probability of such a shortage has been enormously exaggerated by well-meaning enthusiasts, and also by those who have ulterior reasons which can be readily guessed at. The great departments which existed and the new departments which have been created for purposes of war are filled with men who have no wish to be deprived of lucrative and safe jobs. Their heads are in many cases loath to forego the authority and interest of directing great works which would otherwise be carried out by private agencies. Politicians exist who would not object to have more patronage to dispense, and under the specious title of "Reconstruction" there are speakers everywhere who are urging us to remain quiescent under the sway of bureaucracy. But the average man who has suffered by the stoppage of his business is in no mood to acquiesce a moment longer than is necessary in a system of permits. We have tasted the fruits of control, and it is bitter in our mouths—we have submitted to it as a necessary evil for one end alone, and now that end is almost achieved. The last four and a half years have been the golden opportunity of the official to-day, and we feel that the average citizens must have their liberty restored to them. Nor do we anticipate any shortage of labour, in fact, unless labour—as we hope—will learn to work with capital for a common end there may be more labour than can be employed.

As Mr. Hare reminded the meeting, timber, which will probably be the material most difficult to obtain, is one which we can obtain in increasing quantities from our Canadian Dominions, thus helping the great cause of trade within the Empire.

The second of Mr. Hare's points is a project which we believe he has had in view for some time—the reform of the time honoured but very harassing law of "ancient lights." In no land except our own is the freedom of the builder similarly fettered, but here we have allowed a custom to crystallise into a law which is a terror to the unexperienced in our great cities and a crying injustice in equity. No one profits by it if we except an occasional owner of property and a small number of skilled surveyors whose expert services are constantly called into requisition, and these are for the most part a body of men whose services are so useful to the community that they will be unlikely to regret the mitigation of the law of ancient lights. The President's proposals are not of a Bolshevist order—the elimination of what has been regarded in law as possessory rights—but simply the prevention of the acquisition of such rights after a given date.

We trust that this reasonable and useful change may be brought about during Mr. Hare's presidency, but in any case we congratulate him on having brought forward a most useful proposal. On the general question of permissible heights we think the recently passed Zonal Laws in New York are well worthy of careful consideration, and we hope when the time comes for a further Metropolitan Building Act we may see heights broadly regulated according to the widths of streets and general conditions affecting localities, and not simply by the accident of building on old foundations or otherwise as at present. This and an amendment of the law of ancient lights would do much to enable us to improve London and other of our great cities.

Mr. Hare's third point arose out of a reference to the wish that some great memorial should be erected to commemorate the deeds of our citizens in the great war, and he expressed a wish that a meeting should be held at an early date in order that the Institute should take a definite step in agreeing to promote some great scheme. He naturally mentioned the erection of a new bridge at Charing Cross and the removal of the present terminal station to the southern side of the Thames, for no great project we ever remember has appealed so much to the public, thanks to the services of the London Society in giving it publicity. It has all the necessary elements for a great memorial scheme, fulfilling in the first place an admitted public want which should for utilitarian and traffic considerations be carried out. Besides this there can be little question that a great bridge over a river appeals as few other monuments can do to the imagination of all, and its adjuncts in the treatment of approaches, and the provision of suitable sculpture afford scope for the fullest æsthetic expression. And while we are speaking of the bridge let us not forget that long delayed scheme, the great tunnel which will, we hope before long, be made beneath the seas to France, joining us to the country which Englishmen hold in reverence for what she has suffered and achieved in the great struggle for European liberty. No result obtained in this war will equal the happiness we feel in the approaching reunion of the lost provinces with their mother France; no greater practical expression of trust in our nearest continental neighbour with whom our ties are now so close can be imagined than the building of the tunnel, and nothing could better form our war memorial than the monumental treatment of the approach to the London gateway to the European world.

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Illustrations.

EASTRIGGS HOUSING SCHEME (NO. 1).

Notes and Comments.

The Port of London Offices.

It is greatly to be hoped that no check will be placed by the authorities on the speedy completion of the Port of London Offices. Those who have visited their present congested and inadequate offices in Leadenhall Street, with its scattered outside departmental annexes, can fail to recognise the great disadvantages under which the Port Authority now carries on its work, while it needs little imagination to understand the great importance of the functions exercised by the great public body to whose untiring efforts is due the fact that London is rapidly making its way to the forefront as the finest port in Europe. It is not many years since the conditions of the port and the river, the inadequacy of dock accommodation, and the absence of much of the necessary appliances for dealing with transport was the wonder of our commercial rivals and a great slur on the intelligence and energy of the business community. The Port Authority have within a comparatively brief period revolutionised these conditions, and its efforts to effect still greater improvements are unceasing and untiring. There is, in our view, no single building in the country the completion of which is so important to the whole community as that of the great block of offices for the Port Authority. We might add that its plan and arrangement leaves nothing to be desired, and that it will rank with the best American commercial buildings as a model of arrangement by which the business of a great enterprise can be expedited. We trust we are nearing the end of control, but in any case this is the last building in the country which should be delayed.

Mrs. Lloyd George on Housing.

The "Weekly Dispatch" contains the account of an interview with Mrs. Lloyd George, in the course of which she expressed her views on the housing question, and after a general eulogy on the part women have played during the war she predicted that houses will in future be planned to save women domestic drudgery by the adoption of better methods of lighting, heating, and cooking, and a more generous provision of cupboards. She added that as women had always allowed men to build the houses in which women had lived and worked they could not complain of past mistakes. Mrs. Lloyd George also emphasised the importance of the garden in relation to the house. Most of such criticisms will be met if in the future we can obtain a supply of cheaper electricity, but as for the cupboards we believe that women architects—whom we should welcome to the profession—will find, as men have done, that cupboards take up room and cost money, and the space added in one direction must involve deduction in another, which is often difficult or impossible to effect, and that there is not always money for unlimited cupboards. We welcome women to the ranks of the profession, as we believe that everyone, whatever their sex, should have an opportunity of exercising their talents, and also because we are sure that ampler experience in practical difficulties will induce more tolerance, because it will enable them to realise the gap which always exists between the practical and the ideal which all of us have in view.

An Overseas Memorial.

The Overseas Club and Patriotic League has raised £837,000 for war purposes. The Central Committee has decided that the time has come to formulate a scheme for a memorial to those from the Overseas and the Old Country who have fallen in the struggle. A threefold obligation is recognised: (1) to remember the dead; (2) to look after the living; and (3) to take care of future citizens of our race. It is proposed to build headquarters in the heart of London to form the centre of a chain of branches all over the world. There is to be an Overseas Information and Employment Bureau, an Overseas Trade Bureau, while the club's journal, "Overseas," will be published at this central office. The main object of the building will be to provide wanderers with a home in the heart of London, to ensure that no visitor from Overseas shall ever feel lonely again, and to make an Imperial nerve-centre from which all schemes for the good of the British Commonwealth of nations shall radiate. We have no doubt that this admirable end will be in a large measure achieved by the club, to which we wish every success.

The Passing of the War Officials.

We hope that with the holding of the General Election we shall hear the welcome news that the various controls which have checked, if they have not entirely stopped, building and other enterprises will be abolished. Mr. J. W. Simpson made the excellent suggestion at the R.I.B.A. that every candidate should be asked to pledge himself to work for the abolition of control, and that the vast "dumps" of official forms and permits with which we have been so long familiar should be blown up, or, better still, consigned to the paper mills for better and more suitable use. We know that after the war we shall all have to fight against the immense new bureaucracy which has been created for war purposes, and which so many would like us to be permanently shackled with in the coming years of peace. As we have before stated, the war, difficult and intricate as have been the problems involved, is a mere bagatelle compared with the questions with which the Department of Reconstruction is so anxious to meddle. We really have no use for these would-be complacent arbiters of our future destinies, and the time is rapidly approaching when the average man who has to make his way and pay his taxes should receive a little consideration and attention from the representatives of the people. Nobody except a little party of Socialists and extremists wants the retention of the war official, and the more thoroughly the present or any Government understand this the greater will be their chance of securing the support they desire.

The Presidency of the R.I.B.A.

Mr. Perkins Pick, of Leicester, in seconding a vote of thanks to Mr. Hare for his address, called attention to the fact that no provincial architect had ever been appointed to fill the highest office in the profession. We sympathise with him in his wish that the precedent of the Institute should be broken in this respect, for many eminent members of the profession who have worked well and steadily for the cause of architecture and done it honour have been provincial men. We may mention among them the late John Douglas, of Chester, Messrs. Paley & Austin, of Lancaster, Mr. Brierley, of York, and others who could be suggested and whose names will occur to our readers. A provincial architect is brought into closer touch with many of the varied sides of building activity than the London architect, he is often more appreciative of the difficulties of the profession very much in the same way that Mr. Hughes, of Australia, and Sir R. Borden, of Canada, can better appreciate our Empire problems than many of our own statesmen. If a great provincial architect can give up the time which the duties of President involve he should be specially useful to his brethren, and we should hail the appointment of a leading provincial architect with every satisfaction.

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ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Address by the President, Mr. Henry T. Hare, at the Opening General Meeting, Monday, November 4.

LADIES AND GENTLEMEN,—When we look back upon the years which have passed since the great catastrophe overtook us, and compare our outlook at each of our annual opening meetings with that which lies before us to-day, there is substantial reason for congratulation. We have always been able to contemplate the future with confidence, and each of the annual addresses has concluded with the hope and expectation of peace being once more with us during the succeeding twelve months. Looking back over that dreary period of hope deferred, we are now able to see events in something approaching a true perspective and to realise that those years have been occupied in organisation and preparation for the wonderful events which we are witnessing day by day. We meet under the happiest auspices, seeing before us a definite prospect of an early conclusion of the sacrifices and horrors from which we have been suffering, and we are able to look forward to the restoration of peace within a measurable time: a peace which we all hope and trust will be lasting and permanent, "broad based upon the people's will," and so inspired and regulated as to lead to the happiness and prosperity of the whole world, whose ideals have been uplifted and purified by this long period of suffering and trial.

We stand to-day at the threshold of a new era. Our whole system and scheme of life have been dislocated and virtually destroyed. Industry, commerce, and society must be reconstructed and reconstituted on a new plan to meet the altered conditions. We have the opportunity of making a new beginning, and it is for us to approach the complex problems which face us with open minds anxious to build upon a sure and solid foundation, endeavouring to keep all the various factors before us in due and proper relation.

Reconstruction is the comprehensive word which expresses the problem which faces our country in every industry, calling and profession. In our own case, the practice of our art during these years of war has been almost entirely in abeyance. We have had to submit to restrictions greater than those imposed upon any other profession, and we have done so cheerfully and willingly. Our younger members have with one accord diverted their energies from the arts of peace to those of war, and while we are proud of what they have accomplished, we remember with sadness, though with gratitude, those who have fallen in the struggle. We shall welcome those who come back to us and endeavour to make their return to peaceful occupations as easy as may be.

I have alluded to the restrictions which have been placed upon our work, which have borne very hardly on most of us. We have submitted without complaint because we knew that it was necessary and essential to divert the whole energy and resources of the Empire to the one purpose of defeating a thoroughly organised and well prepared enemy. With the restoration of peace that necessity will exist no longer, and we feel that we should not be asked to bear longer than is vitally necessary a special burden which other members of the community do not share. It will be within your recollection that early in the present year a general meeting was held here at which a resolution was passed for transmission to the authorities asking that on the conclusion of peace all such restrictions should be removed forthwith. That resolution was duly conveyed to the proper quarter.

Following that, a conference of architects, surveyors and builders was held for the purpose of considering some of the problems which will arise after the war, at which a similar resolution was passed, pointing out that the abolition of control in all matters relating to building, and particularly in materials, is the best means of stimulating production, which is of most vital importance. That resolution was conveyed to the Minister of Reconstruction by an influential deputation, and the considerations which had influenced our opinion were fully explained. We were received most sympathetically, but notwithstanding our efforts I gather that some measure of control or restriction is to be imposed, though there is reason to believe that it will be of such a nature as to bear as lightly as possible upon the community and that its relaxation will be so rapid as to allow of a speedy return to normal conditions.

The necessity for some control is apparently dictated by the shortage which is anticipated in certain building materials, more particularly timber, which is mainly an imported product. Whether this shortage will be really so acute as some of us think is open to question, but, however that may be, the view is that measures should be taken to divert the supply available towards the most necessary and urgent national needs. This is quite a logical attitude, but it seems to some of us that control is not really essential, at all events in such building works as do not require materials of which there is a serious shortage.

The supply of timber from the Baltic, which has hitherto been our main source of supply, will probably be greatly restricted for some time, and it will be necessary for us to look to other countries. In this connection I wish to call your attention to the exhibition which is installed here of timber from the United States and British Columbia, timber which is in no sense inferior to that we have been accustomed to use and which is available in unlimited quantities assuming that the question of transport can be satisfactorily provided for, which I am assured will be the case. I need not remind you of the invaluable assistance and loyal support which have been freely afforded us by our great Dominion of Canada, in common with all our other Colonies and Dependencies. They have poured out blood and treasure without stint or limit. Surely it is our duty as well as our interest to support the staple industry of the Western States as far as may be practicable. I commend to all architects the careful consideration of this exhibition, and would urge them to provide for the use of such timber so far as may be possible in the buildings they are about to be engaged upon.

The same conference to which I have above alluded passed a resolution dealing with demobilisation which urged that architects and surveyors should have priority of release from military service on the ground that their work is a primary necessity for the reconstitution of the building industry. A deputation conveyed this resolution to the Ministry of Labour, and I believe that our suggestion will be acted upon and that the Institute will be asked to co-operate in carrying it out.

A difficult problem confronts us in the resettlement of architects who will be returning to civil life, more particularly those who were but partially educated in their profession and those whose studies were interrupted. It is a very serious matter for these young men to have lost four years of study and to have the date of their qualification put forward to that extent. While it is, of course, essential that they should be thoroughly qualified by a proper period of study and experience, every facility must be given them to acquire the requisite proficiency in the shortest possible period, and this matter has engaged the attention of the Board of Architectural Education, who are making such concessions as may be possible. For such men as will be released from the Army without any professional training I very much doubt whether architecture can be regarded as a desirable profession for them to enter, unless they are in a position to devote something approaching to the normal years of study to their qualification.

You are aware that about a year ago, at the instance of the Local Government Board, we instituted a competition amongst architects in England and Wales for designs for houses for the working classes to be built immediately after the war by local authorities. Such houses have hitherto been built mainly by speculating builders without the intervention of an architect, but it is now felt that the problem is worthy of more serious consideration than it has received. The programme of our competition was carefully drawn up, and was con-

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ducted in conjunction with our Allied Societies in six separate centres, so arranged as to embrace the whole of England and Wales. The response made by the profession has been most gratifying, and most of you, no doubt, have seen the results exhibited on the walls of our galleries. Designs of four different types of houses have been selected in each centre, and these are to be published at once in book form with descriptive letterpress.

It was not to be expected that such a competition would produce anything very original or revolutionary, for the problem is of too simple a nature to allow of it. The real solution lies in a carefully considered balance of parts—in fact, a compromise in which the importance of each feature is duly weighed and given its correct relative position. I think many of our selected designs have very fairly secured this, though I would not say that any individual design is not capable of improvement in some particular. One of the main purposes which have been served by the holding of the competition is to identify architects more fully than has hitherto been the case with this class of building, and I have some confidence that local authorities will, in most cases, recognise that it is to their ultimate interest, both financially and otherwise, to employ independent architects to carry out these undertakings. It cannot be too strongly emphasised that in future these houses, which from their number and universal distribution form so large a feature of our town and countrysides, must be pleasant to look upon, healthy to live in, and carefully studied in their arrangements while at the same time being economical to build. In order to secure these virtues great skill and mature knowledge are essential in the designer, probably in a greater degree than is required for a more complex and expensive building. The very simplicity of the problem enhances its difficulty.

Following the competition we have suggested to the Local Government Board the desirability of actually erecting a small number of these cottages in a readily accessible position near London and furnishing some of them ready for occupation, so that they may be inspected and criticised by all those who are interested and serve as a general guide to those who are about to promote housing schemes. It is felt that by no other means can a really satisfactory solution be arrived at, for mere drawings cannot convey the same impression as the actual object in being. I am happy to say that this suggestion has been accepted, and we are now considering the details of carrying out the project with the least possible delay.

During the period of inactivity in the legitimate exercise of our profession, we are taking the opportunity of inquiring into the status of the architect. It is felt that, although the course of study and attainment required to equip an architect to carry out his duties efficiently is at least as severe as that required for other professions, from many causes the general public do not appreciate his position adequately. A very large amount of building is carried on either without an architect or under an entirely unqualified practitioner, thus bringing the profession into disrepute and leading to many abuses. The policy of the R.I.B.A. has been for many years to insist upon a very thorough course of training and education to qualify for membership, but unfortunately a large number of architects do not submit themselves to this course and consequently do not belong to us; indeed, the difficulty of admission may be said to act as a deterrent.

Is there any means by which the building public may be enabled to distinguish between the qualified and the unqualified?

Is it practicable, short of actual compulsion, to ensure that every man who seeks to enter the profession shall be properly qualified by education and training to carry out the duties of his position to the satisfaction of his client and the benefit of the community?

Have we, hitherto, properly correlated and adjusted the relative importance of the practical business side of our work with the historical and artistic aspects?

Can any steps be usefully taken to organise and unify the profession?

These and kindred questions are now being carefully considered, and the views of those competent to give opinions are being collected and noted with a view to so ordering the policy of the Institute as to lead to a general improvement in the position of the profession.

In this connection it is felt that architects have not hitherto adequately taken their part in public affairs, on many aspects of which they are peculiarly qualified to speak. We ought to have our representative in Parliament, and there are few local bodies which would not be strengthened by the addition of an architect member, who would concern himself with the building projects of the district and its amenities.

I should like to see every town and village with its Amenity Committee consisting of those residents who are interested in its history, monuments and antiquities. I would have every new building or public improvement subject to the criticism and to some extent to the control of such a body. Here is a wide field for the activity of architects and one which would enable us to forward the education of the public in artistic questions which are generally lost sight of and submerged in the purely practical and utilitarian aspect.

Most of us have, I imagine, at various times during the course of our practice, been confronted and obstructed by the difficulties arising from our absurd and illogical laws (or absence of laws) in respect of light and air. As matters stand at present, an owner of property who wishes to rebuild is liable to be prevented from properly developing his site within the limits of the Building Acts by the dominant rights of adjoining owners acquired simply by lapse of time, and without any payment, consideration or purchase. This is a very serious disability, and leads to the mutilation and crippling of many fine buildings. So far as I know no other country suffers from such a condition of the law.

The Council have considered whether any steps can be taken to amend the law (without of course interfering with any rights already acquired), and the draft of a Bill has been prepared, the object of which is to prevent after a date to be fixed the acquisition of any indefeasible rights over adjoining property merely by the lapse of time.

The present moment appears to be a favourable time for putting forward such an amendment, as it is understood that shortly after the conclusion of peace a number of alterations in various laws are to be put forward, with a view to simplifying matters and avoiding needless litigation.

I need hardly say that a full opportunity will be given to members to discuss this proposal in a General Meeting at an early date.

Now that peace appears to be so near to us the question of an adequate war memorial is pressed upon us more insistently. The events of the past four years are so close to us that we do not realise the magnitude of the achievement which is to be commemorated, how narrowly humanity has escaped a colossal catastrophe, and how great and complete is the victory which is now being secured. Consider how Paris commemorated the Napoleonic epoch in the vast scheme of which the Place de la Concorde is the centre, and how Italy (far from being a rich country) recorded her war of liberation in the Victor Emmanuel Monument in Rome. Yet the events which these memorialise, great as they were, sink into comparative insignificance beside the present great world upheaval.

Surely we can and shall be able to find some means which shall mark for all time in a great and imperial manner the part which our Empire, wide-spread and world-wide, has taken in these events; some great scheme which shall rise above and beyond a mere project of estate development, affording a promising field for the activities of the speculative builder. Such a scheme should be centralised in some great monument of a character to excite the imagination, and providing a field

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for the adequate commemoration of the share which every portion of our Empire has taken.

I venture to suggest that the scheme for a new Charing Cross Bridge and its approaches and the removal of the station to the Surrey side of the river is such a project; with proper support by the nation at large it is capable of being developed into a truly imperial project, worthy in every way of the great events which are now developing.

The Royal Academy has recently very properly established a Committee of Artists to assist in the initiation and execution of war memorials, a very necessary and useful office if we are to avoid former failures. Could not this Committee, enlarged perhaps and put on a somewhat broader basis, take into consideration the question of this great national memorial, and prepare under its ægis a definite project which would be put forward with all the authority of an entire and united body of all the artists of the Empire? What is wanted, I think, is some such definite proposal and it is needed without delay. There is no reason why we should wait two or three generations for the realisation of the scheme. It should be carried through with the enthusiasm and energy which the war has called forth, and while the great struggle is fresh in our memory.

I should like to take this opportunity of congratulating our respected member, Mr. Banister Fletcher, on his election as Sheriff of the City of London. He and his father before him have had a long connection with the R.I.B.A., and it is gratifying to us to see him holding this post of high honour in our venerable city. We wish him every success during what promises to be a very memorable year.

I fear I have detained you too long, but I am sure you will see that we are confronted with many grave problems whose solution will demand all the wisdom we can command. The coming year is to be one of the most eventful in all history, and on the decisions to be taken will depend the welfare and prosperity of future generations. We look forward to the immediate future with high hope and confident expectation, feeling that we have passed through the worst days of trial and anxiety, and that we may at last emerge into a period of peace and prosperity.

Mr. John W. Simpson proposed a vote of thanks to Mr. Hare for his address. They had, he said, had the pleasure of listening to an excellent, practical, and useful address by a gentleman who had a clear idea in his own mind of what he wished to say. No public speech nowadays could avoid referring to the war, and he was afraid that presidential addresses for many years to come would be based upon the problems which the war involved. Mr. Hare had very rightly made reconstruction the keynote of his address, for it most closely and urgently affected their profession. He knew that he spoke not only for the Institute but for the whole building industry when he (Mr. Simpson) insisted that the present restrictions should be removed forthwith upon the cessation of hostilities. That they might be short of some raw materials for a time, timber and certain metals was possible, and probably they must be prepared for some allocation of those things on account of the difficulties of transit, but that shortage would soon cease if supply and demand were left free to adjust themselves. He was afraid that the officials in charge of the monstrous Government departments which had sprung up in connection with the war had come to consider themselves essential, and strong rearguard actions would be fought to delay their suppression, and to safeguard their stores—those gigantic piles of correspondence, returns, forms, and orders which they had accumulated, and which the public intended should be consigned to the pulping mills. In view of the near approach of a general election the most determined assurances should be required of all candidates that those departments should be abolished root and branch, and that the numerous clerks should be put to some productive employment. The President had indicated the steps which the Institute was taking in that matter, and they might congratulate him upon them. One point on which Mr. Hare had not touched, and on which the Institute was to be congratulated, was on its choice of a President. (Hear, hear.) They had always been fortunate in that respect. He (Mr. Simpson) was able to remember eighteen different presidents, of whom the first was George Edward Street, and in every case it could be said that by common consent they were the most suitable men who could have been chosen, and Mr. Hare was no exception to the rule. He was going to tell them why that was the case. They architects criticised one another and their work very openly and very freely, but as a profession they were almost entirely free from jealousy. The custom which prevailed among them of open and loyal competition by means of submitted work had taught them to give and receive hard knocks, but when an important commission was entrusted to a capable man, or when Royal honours fell in his way, or when he was called to some office of dignity—as was the case with Mr. Sheriff Banister Fletcher—all his brethren rejoiced in his good fortune, and took him as an example to be followed. He was proud to belong to a profession that could make such a claim, and that was why they were able to select their presidents instead of taking them by rotation and seniority.

Mr. Perkins Pick seconded the motion, and remarked that he quite agreed with the hopeful outlook which Mr. Hare had indicated. For a long time they had been suffering behind the clouds, and now that the sun was breaking through they ought to receive some benefit. During the past four years architects had suffered perhaps more than any other portion of the community. Their work had not been appreciated, and they had been altogether neglected. He could not think that had been an advantage to the community, and he believed that a very large portion of the work that had been carried out by great public departments would have been carried out cheaper, better, and in a shorter time had architects been consulted. As a profession they did not wish to grumble unduly, but he thought they were entitled to air their grievances and place them before the authorities in due time. They, of course, knew that everyone had to make sacrifices in the great struggle which had come upon the world, but as far as their profession was concerned he considered they had been unduly hard hit. The President had referred to the question of restrictions after the war. He thought it was evident to them all that some restrictions would be necessary for a period at any rate after the termination of hostilities, otherwise those who clamoured unreasonably to get possession of building materials would receive undue preference, and to obviate that he thought it would be necessary to place some restrictions for a time upon the restricted quantity of building materials which would be available. With regard to the cottage competition he considered that was one of the best investments the Government had ever made in a small way, and it was one of the best things the Institute had ever done. He felt sure that the result would be helpful to all those authorities who were considering the provision of houses for the working classes. He thoroughly endorsed what Mr. Hare had said in regard to the necessity for some alteration of the law in reference to light and air—the position in that respect had been a crying shame during the whole of his life. There was hardly a man in that room who had not come up against some iniquitous case, and he believed there were thousands of windows now acquiring light to which they were not entitled. If the Institute could get some alteration in the law it would benefit the community, and would be appreciated by architects and builders generally. He supported the remarks of Mr. Simpson in reference to the happy manner in which the Institute had always selected its President, but he would like to suggest as a guide for the future that they might think fit to appoint a President from the provinces.

The vote was carried with enthusiasm.

The President announced that the next meeting would be held on Monday, November 18, when Mr. W. Dunn will read a paper on "A Housing Scheme at Chepstow."

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OLD LONDON: NORTHUMBERLAND HOUSE AND THE STRAND IN 1874.—From the "Literary History of the Adelphi and its Neighbourhood."—(See leading article October 25.)

THE INSTITUTE OF SCOTTISH ARCHITECTS.

THE Institute of Scottish Architects were recently invited to give evidence in Edinburgh before the Chairman of the Building Materials Supply Committee under the Ministry of Reconstruction. The terms of the reference, and a summary of the evidence given by the representatives of the Institute of Scottish Architects, are appended.

"In the event of the supply of material or labour being insufficient to fulfil the total building demand, to consider the principles and method by which the priority of various claims should be settled; and to report what steps are necessary to ensure that the manufacture of the materials, so far as they are at present inadequate, shall be extended in time to secure sufficient quantities for use when required on the cessation of hostilities, and to recommend what steps should be taken during the war to facilitate a prompt commencement of building work.

"Generally to consider and report upon any conditions affecting the building trades which tend to cause unduly high prices, and to make recommendations in regard to any measure of control which it may be desirable to exercise over the purchase and production of material."

We think there can be little doubt that the supply of materials, and possibly of labour, during the "transition period" will fall short of the requirements.

In these circumstances we are of opinion that in the national interest priority will have to be accorded for a time to constructional work and building operations of certain kinds.

Among these are shipbuilding, the extension or erection of factories necessary to enable the country to become self-supporting or at least less dependent on foreign supplies, and the building of the large number of houses required for the housing of the working classes.

We are further of opinion that preference may be necessary for a time for the extension or erection of schools and other educational institutions, and for public buildings essential for the welfare of the community.

Priority having been extended for the purposes generally indicated above, we are of opinion that all further claims should be dealt with alike, but we venture to suggest that claims for expenditure on war memorials should receive special consideration.

To enable claims for priority to be dealt with it is obvious that Government control is essential, but we urge respectfully and strongly (1) that such control should come to an end as soon as that is possible, and (2) that the control should be decentralised, and that for Scotland there should be a department armed with wide powers and responsibility.

As regards the steps necessary to provide for increased production of the necessary building materials, we would suggest that, as soon as it is possible to release men from military service, those who were formerly engaged in the production of building materials should be returned to civil life, and that it is even of greater importance that those who were employers, or were engaged in the control of those engaged in production, should be released in time to organise the resumption of production.

We desire to point out that if building is to be resumed immediately after the termination of hostilities the necessary plans and other arrangements for building must be in readiness beforehand. To that end architects, draughtsmen, and surveyors should be among the first to be returned to civil life when military requirements permit.

We have difficulty in suggesting any method of control which could effect a reduction in the cost of building materials, and believe that increased production will automatically and alone tend to reduce unduly high prices.

On the other hand, we think that considerable reduction of prices would follow on better methods of distribution were inland carriage improved and rates reduced.

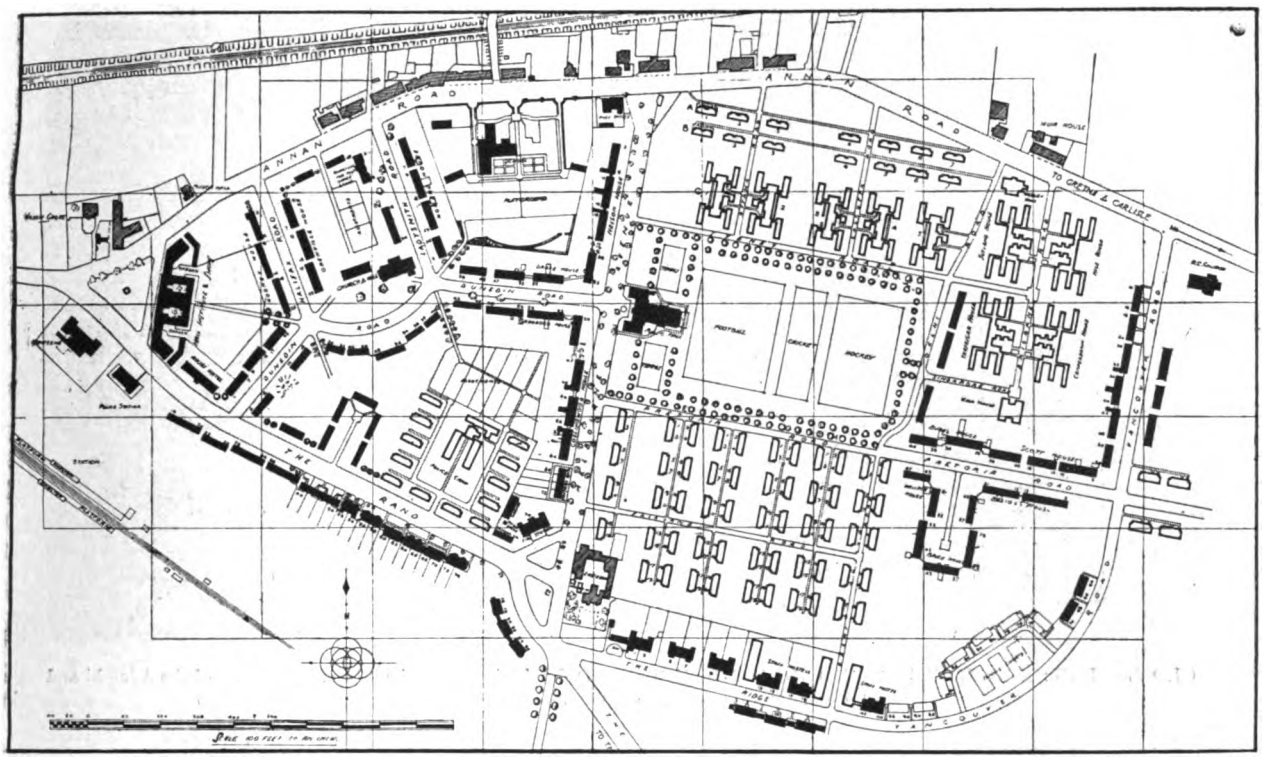
In our opinion the present excessively high cost of building is due not only to the high prices of materials, but to the unduly high rates of wages. We recognise that the increase in the cost of living and the smaller purchasing power of money together warranted large advances on pre-war rates; but the standard has risen out of proportion to these causes.

This we believe to be due, in great measure, to the conditions under which necessary war work has been carried out under Government control; and that when work comes to be done under natural conditions, and without Government control, the rates of wages will return to their true economic level.

We desire to repeat that we believe it to be in the interests of the country that Government control of materials and labour should cease at the earliest moment.

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Monthly Housing and Town Planning Review.



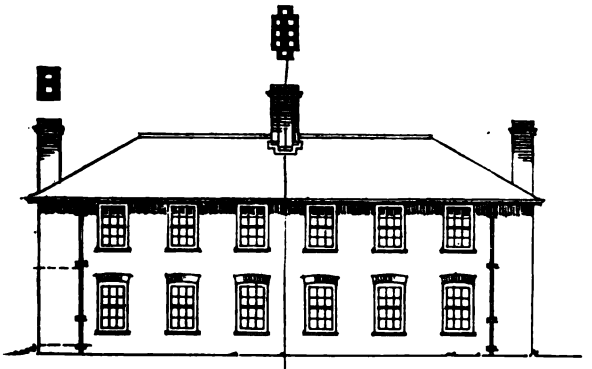
EASTRIGGS HOUSING SCHEME.

We give further illustrations of the Eastriggs scheme which is subsidiary to that of Gretna, but we have not included a description as it is hardly necessary, and time scarcely permits us to obtain the sanction of the Censor to what we have to say. The difficulties of a censor are obviously great, for were this not so it would be easier for him to deal with simple descriptions which it is difficult to see can be of much service to our enemies. We hope in the near future that these hard worked officials will be relieved of duties which must be at once onerous and nerve-racking. In our next town-planning issue we shall illustrate the Fairbrother Fields Housing Scheme at Dublin, and afterwards we shall complete our illustrations of Eastriggs.

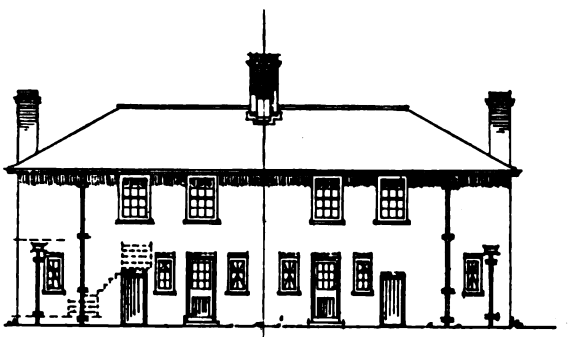
LEICESTER AND A RING ROAD.

Some little time ago an account appeared in the local papers of a conference between Leicester and its surrounding authorities preparatory to producing a town-planning scheme. The chief point which emerged in the course of a very friendly meeting was the need for a Ring road round Leicester, and the impossibility of carrying it out unless the town itself were able to have the co-operation of the smaller districts adjoining it.

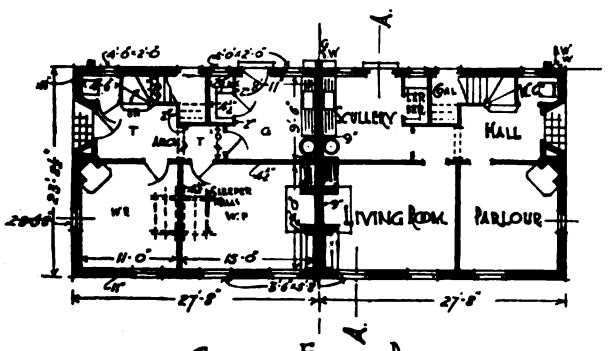
This meeting drew attention to the question of one of the larger issues of town-planning. A Ring road may not be a necessity in every case, and it is quite possible that an imitation of the accomplished Liverpool Queen's Drive might produce some unnecessary circles; but, at any rate, the Ring is an idea. It gives, as it were, a back-



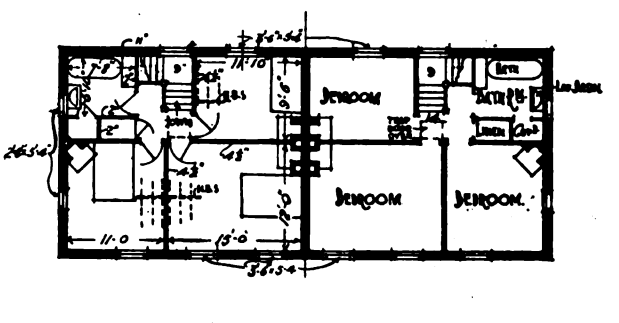
FRONT ELEVATION.



BACK ELEVATION.

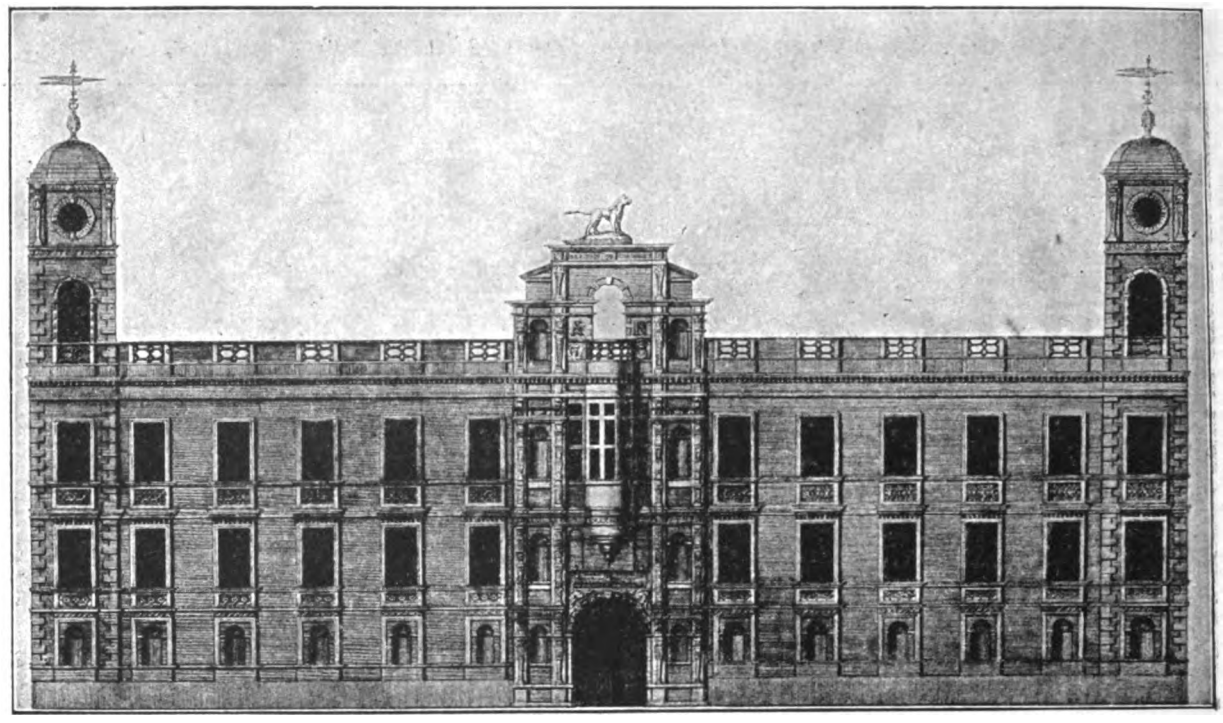


GROUND FLOOR PLAN.



FIRST FLOOR PLAN.

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OLD LONDON: NORTHUMBERLAND HOUSE DEMOLISHED IN 1874.—From the "Literary History of the Adelphi and its Neighbourhood."—(See leading article October 25.)

bone (if a vertebra could be considered to take the form of a circle instead of a straight line) to what otherwise are only too likely to be spongy invertebrate groups of house cells. There is something in a Ring for the imagination to take hold of, and for the practical mind to embark on, and this is a very real advantage. There is a danger in the many schemes that are in the air for simplifying town-planning, to reduce it to the form of a series of somewhat elastic by-laws, which will merely control development as it occurs; reasonably, instead of unreasonably, as under the old cast-iron by-laws. But this is not enough: town-planning, if it is to be worthy of the name, must in some sense be creative; and a town and country-side that is working towards the production of a great circular boulevard, cutting through the areas of different authorities, can at any rate feel that it is creating a feature on the landscape which will remain for posterity.

The word boulevard recalls to mind the important fact that a Ring road is by no means solely a circumferential traffic connection. Mr. Brodie, the City Engineer of Liverpool, has always made it very clear that the great width of Queen's Drive, its planting with trees and other amenities, are intended to make it a continuous park strip, quite as much as a traffic route. It will be recalled also that Mr. Niven, in his proposed boulevard round London, connected up by this means a series of open spaces, following on the lines of the rings at Vienna. There was not much suggestion of this use of the Ring in the account of the Leicester meeting, but doubtless the idea would be developed when the width of road was being determined.

But another and very practical value was mentioned, namely, the great amount of new building land which such a road would open up. We are all familiar with the diagram of the growth of a town in which development follows the radiating roads, producing a star-fish pattern and leaving tongues of open land, running towards the centre. The Ring road at once provides a means of developing a large part of these tongues; and for this reason, if put forward with discretion, it will be generally welcomed by landowners.

It is important to remember these two additional uses of the Ring road—as open space provider and land developer. Even if it does not come up to expectation as a diverter of traffic from the crowded centre, it will still not have failed if its other objects are accomplished. It is quite true that some sections will sustain a much heavier traffic than others, and a series of unrelated by-pass roads might conceivably have served the traffic purpose.

SATELLITE CITIES.

In a book entitled "Satellite Cities" * a description is given of the way in which American towns have sprung up, the evils which have accompanied their uncontrolled growth and the measures which should be taken to produce better results in the future. It is illustrated with some interesting diagram plans, four of which we reproduce, which show how the demand for cheap land for manufacturers results in the growth of towns which are often of enormous size, frequently arranged without any thought of the ultimate well-being of the population. The writer says that in our general municipal development we pay more attention to the city planner, and try to re-shape old-established conditions to get newer and more workable models, while at the same time the newer towns are often allowed to shape themselves badly from the outset through want of foresight and planning. Gary, near Chicago, is instanced as a case where the land company has only once advanced the price of lots, a pleasing contrast to other cases in which full advantage has been taken of the opportunity to make a corner in the values created by the growth of population in a manufacturing community. It is pointed out that whereas in an old-established city one industry dies or languishes others take its place, the future of the satellite cities is too often entirely bound up in that of a single industry. Cherry is an isolated Illinois prairie town surrounding a mine shaft, and before the disaster of 1909 many of its thriftiest men had put their savings into house property. Had it not been for relief funds widows would have been compelled to move to places where they could get work, and houses would have been sold for a mere fraction of the money invested in them. The Gary Land Company met such difficulties by undertaking to buy from the workmen houses sold to them at the same amount as that paid, less a sum for depreciation, which is little more than the rent which would have been paid for similar accommodation during the interval. In many cases workmen have refused to live near their work as the attraction of the amenities in larger centres have been too great to be resisted. The incorporation of the satellite cities into the area of the larger towns they are situated near again raises difficult questions, as their plans are often not well adapted to form part of the greater unit into which they become merged. A few notes on the plans given will form the best commentary

* "Satellite Cities: A Study of Industrial Suburbs." By Graham Romeyn Taylor. (New York and London: D. Appleton & Company.)

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of some of the interesting material contained in the work we refer to.

Chicago.—Pullman was the model patriarchal settlement city of the great company which bears its name, and was eventually merged in Chicago by the growth of the city. While its population is about the same as it was twenty-five years ago, Roseland, Kensington, West Pullman, and Gano, which were rural communities, had in 1910 the following populations: 20,901, 6,328, 6,025, and 4,660, while the population of Pullman itself was only 71,931. Roseland was settled in 1849 by Dutchmen who left their country for religious reasons, Gano contains many French Canadians, who were brought in in 1885 to act as strike breakers during a brickyard strike. Gary, with a population of over 50,000, is the great new centre of the United States Steel Corporation. While every conceivable means was taken to economise time and labour in the arrangement of the works, the town was laid out on the old checker board pattern, and will eventually need a costly scheme to improve its lay out like that of Chicago itself. Argo is the new site of the Corn Products Refining Company who moved out there in 1908. The Illinois Steel Works are in South Chicago.

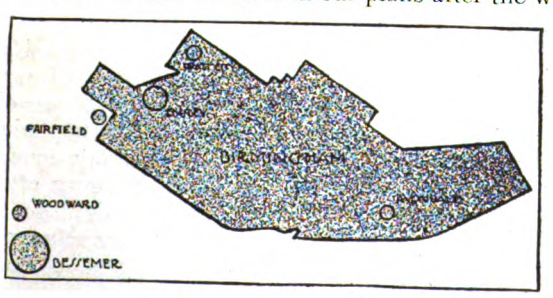
Cincinnati affords a striking instance of the refusal of the bulk of the workers to live near their work. The most widely known industrial plant is the soap factory of the Procter and Gamble Company at Ivorydale, but that neighbourhood is chiefly known for its profit sharing schemes. Norwood, which in 1909 had forty-nine manufacturing establishments, houses comparatively few operatives, but has become a middle-class residential district. Less than one-third of the operatives at Norwood and Oakley live within easy walking distance of their work, the majority being housed in Central Cincinnati, in which nearly half the workers in the outlying districts are housed.

St. Louis in Missouri is surrounded to the east by a number of satellite cities which form the centres of great works placed there to obtain the advantages of cheaper land, railway facilities, proximity to labour supply, cheap fuel, and water. The growth of these subsidiary cities has been rapid.

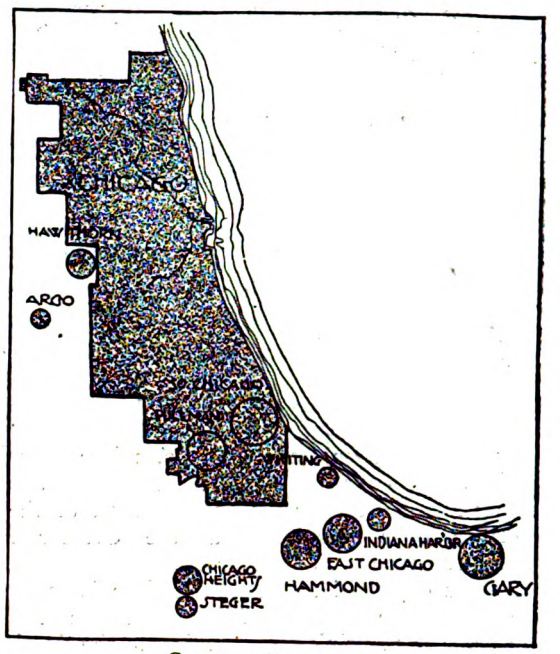
	1900.	1910.
East St. Louis	29,655	58,547
Granite City	3,122	9,903
Madison	1,079	5,046
Venice	2,450	3,718

In the outskirts of Granite City is one of the foreign settlements common in parts of the United States, and known as Hungary Holland, which is peopled by the poorer emigrants from Eastern Europe. Venice has grown little on account of the disadvantages of its site, which is low and wet. It is pointed out that St. Louis, while it is anxious to extend in a westerly direction in the same state and government, leaves the communities on the eastern side of the river out in the cold, though anxious to claim their industries to swell the volume of the St. Louis industries. Although a great bridge was built to relieve St. Louis from high freight rates its citizens refused for years to vote for its completion as they feared railroad control of the Illinois approach. The fourth plan shown is that of Birmingham in Alabama.

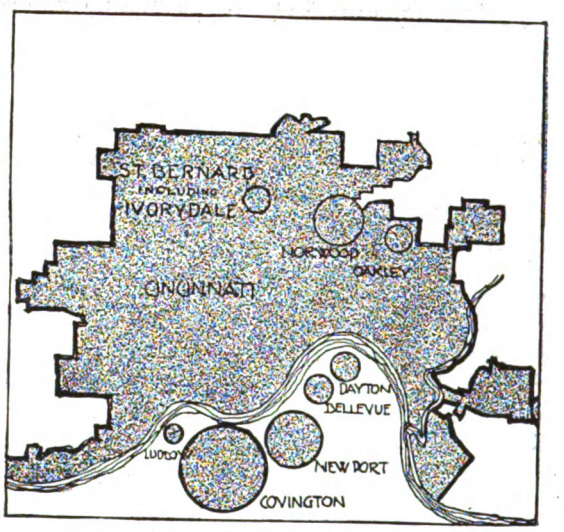
These few notes show the influence of industrial conditions on the location of housing, and show that the trend of population to settle near to their work cannot always be depended on in the case of new cities, a factor which we shall have to bear in mind in our plans after the war.



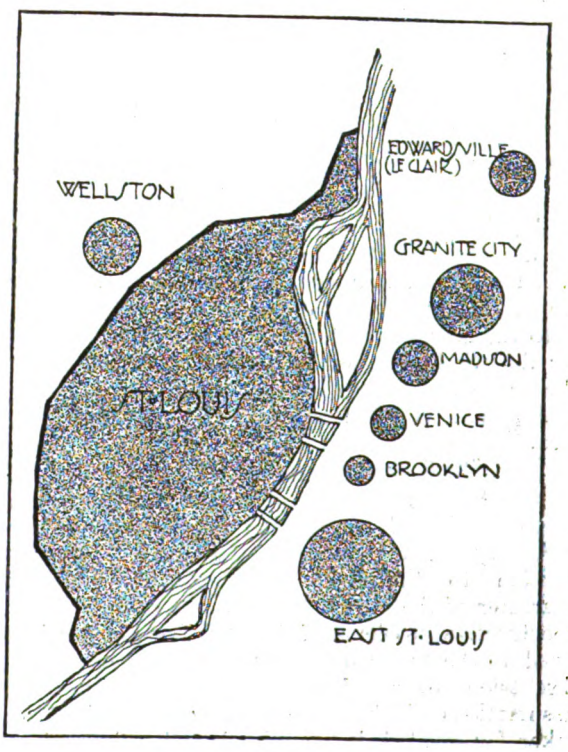
BIRMINGHAM SATELLITES



CHICAGO SATELLITES



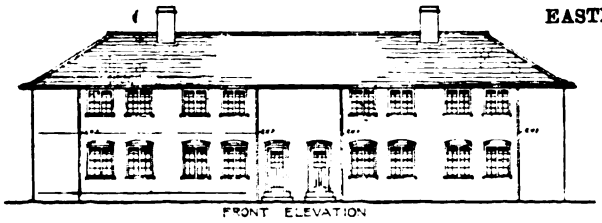
CINCINNATI SATELLITES

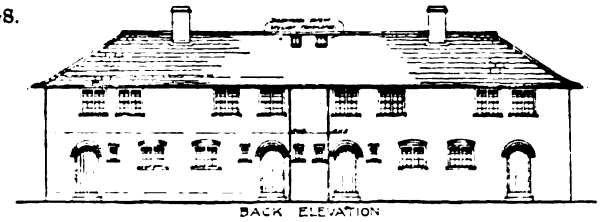


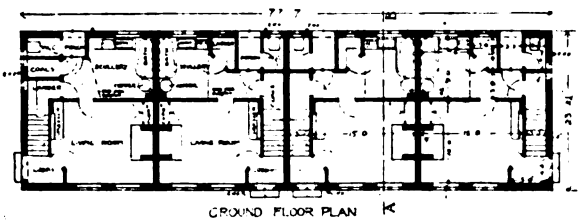
ST. LOUIS SATELLITES

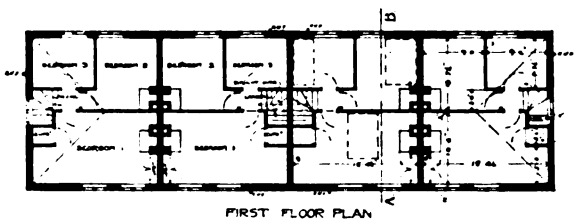
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EASTRIGGS.









ABSTRACTED passages from a memorandum prepared by a special Sub-Committee of the Garden Cities and Town Planning Association for the consideration of the Local Authorities to be represented at the Greater London Housing Conference on October 30.

1.—The object of this Memorandum is to represent to the Conference the need of the application of bold and comprehensive principles of planning to the development of the Greater London region in connection with the provision of houses and other buildings after the war. The problem of housing, it is urged, is bound up with several other problems; in particular with those of the relief of traffic congestion, the construction of arterial roads, the preservation of existing open spaces, and the more orderly and efficient development of industrial areas.

2.—The main facts are: (1) that for more than four years the construction of dwellings for the normal increase of the population has been stopped; (2) that in the London district there remains from pre-war days a great deal of overcrowding and also much insanitary property to be dealt with; and (3) that private building enterprise will be for some time out of action after the war, owing to the dislocation of prices and rentals, the scarcity of material, and the probable opening of many more attractive avenues for investment.

Number of Houses Required.

3.—The Housing Committee of the London County Council have not considered themselves to be in a position to make any estimate of the number of houses required. On the 1911 census basis this growth would be about 265,000 persons in the Metropolitan Police area alone. If we regard the period of reconstruction as extending over the next seven years from the end of 1918, and the same rate of growth to continue during that term, the number of persons to be housed between the end of the war (whenever that may be) and December 1925 can be estimated at 726,000. At an average of five persons per dwelling, 145,200 additional houses will thus be required in Greater London by 1925.

A Systematic Inquiry Needed.

4.—A hundred housing schemes for the area, prepared without relation to one another, would make confusion worse confounded. It is therefore suggested to the Conference that as a first step a systematic inquiry as to the actual need for dwellings should be undertaken for the whole of Greater London; and that the inquiry should be undertaken by the London County Council in conjunction with the other local authorities within the area.

Traffic and Industrial Decentralisation.

5.—Just as it is necessary for the housing problem to be considered for London as a whole, it is equally necessary that the problem itself should be considered in relation to the industrial, political, and economic character of the area. Hitherto the consideration of the constructive problems of Greater London has been confined to the traffic question; and as a general rule the discussion even of that question has proceeded on assumptions which are too narrow. It is far too readily taken for granted that London is and will remain a single organic economic group, wherein the mass of industrial and commercial buildings are centrally placed, and the mass of dwellings are placed in the surrounding suburbs, the whole of the working population passing twice daily between a single centre and a widening outer ring.

Other Results of Lack of Control.

6.—The interests of the present population of London are seriously affected by the lack of co-ordinated control which produces the formless growth on the outer edge, and the over-building of the inner area. The small quantity of open land at present accessible for health and pleasure will be filled in and the open country will be pushed mile after mile further out of the reach of the unhappy central Londoners. The new 145,000 dwellings at an average distance of ten miles from the centre, allowing a due proportion of schools, shops, public buildings, and open spaces, mean the urbanisation of a belt of land nearly three-quarters of a mile wide.

A London Town-Planning Commission.

8.—The calling of this Conference indicates at least a partial recognition of the facts to which attention has been drawn, and it is to be hoped that one result following upon it will be to formulate the demand for the creation of a regional authority. The Conference is asked to consider the desirability of the creation of a Permanent Greater London Town-Planning Commission to exercise control with regard to housing, industrial and residential development, and all means of suburban communication, over the whole region which is in direct and continuous economic dependence upon London.

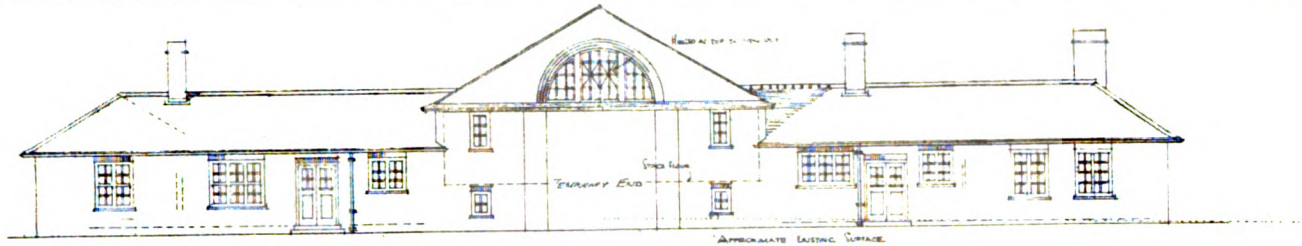
The Principles to be immediately observed.

9.—While such a Commission must be reorganised as being necessary for the ultimate development of the Greater London area, it is suggested that in order to secure immediate action the powers that already exist should be used to the fullest possible extent with due regard for the comprehensive scheme that will have to follow. The most urgent of all questions is the stopping of further building on fresh sites in the central area, and the check to indiscriminate development in the inner suburban zones. It is therefore suggested to the Conference that the following broad principles should be observed by the local authorities themselves pending the creation of a Town-Planning Commission for Greater London and the adoption of a general town plan: That within a radius averaging ten miles from the centre only such building should be undertaken for the time being as is necessary to round-off present development, and that outside that limit existing industrial and residential suburbs should be planned as compact semi-industrial towns.

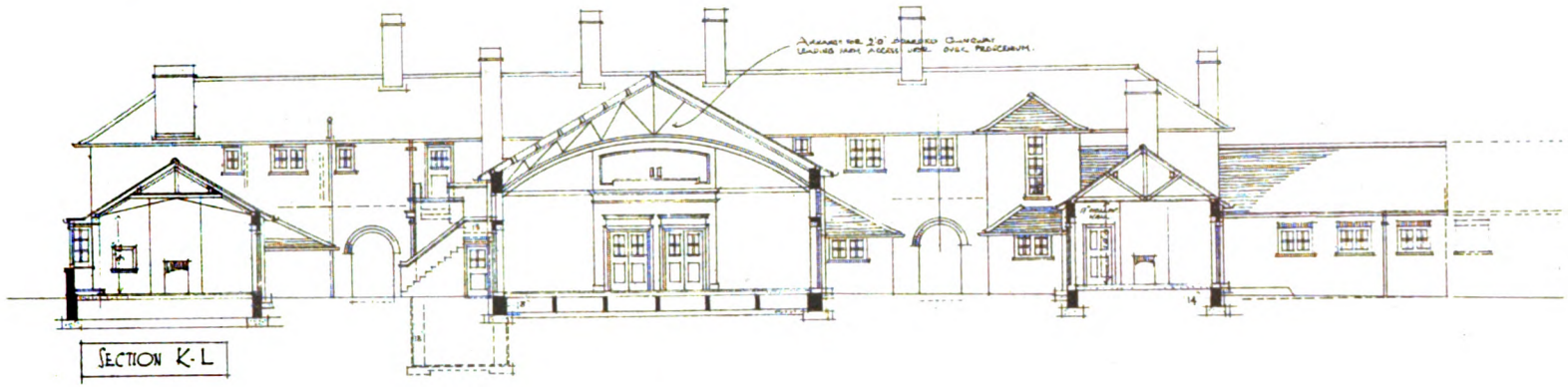
The Conference is therefore asked to consider the following proposition: That suitable areas of rural or semi-rural land be acquired by or at the request of the Greater London housing authorities, particularly the London County Council or the other county councils in the area, in order to carry out the necessary after-war housing schemes. The sites to be, as a rule, from twelve to forty miles from the centre, on or near railway lines, rivers or canals, and capable of development as complete and efficient industrial units.

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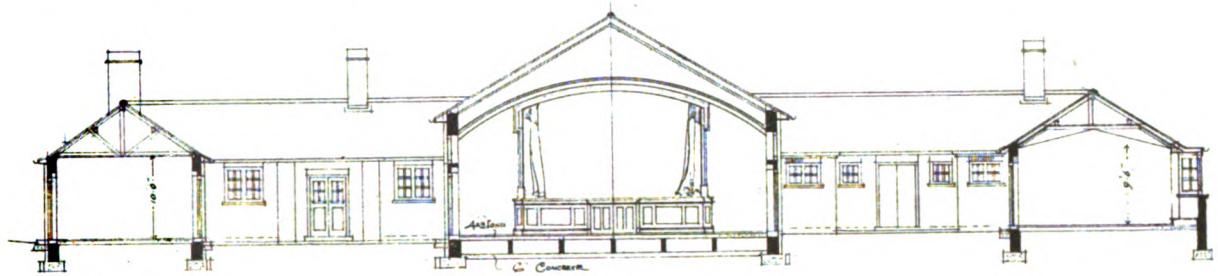
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EAST ELEVATION

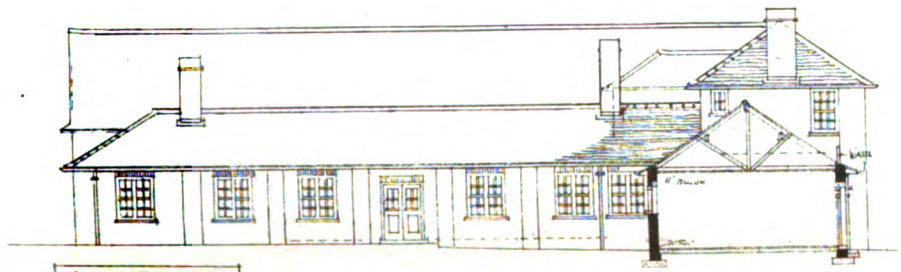


SECTION K-L



SECTION M-N

INSTITUTE & SHOPS - EASTRIGGS



NORTH ELEVATION

INSTITUTE, EASTRIGGS, GRETNA.

PHOTO LITHO SPRAGUE & CO LTD 62 & 70 DEAN STREET, SOHO W

The Architect, Nov: 8th 1918.

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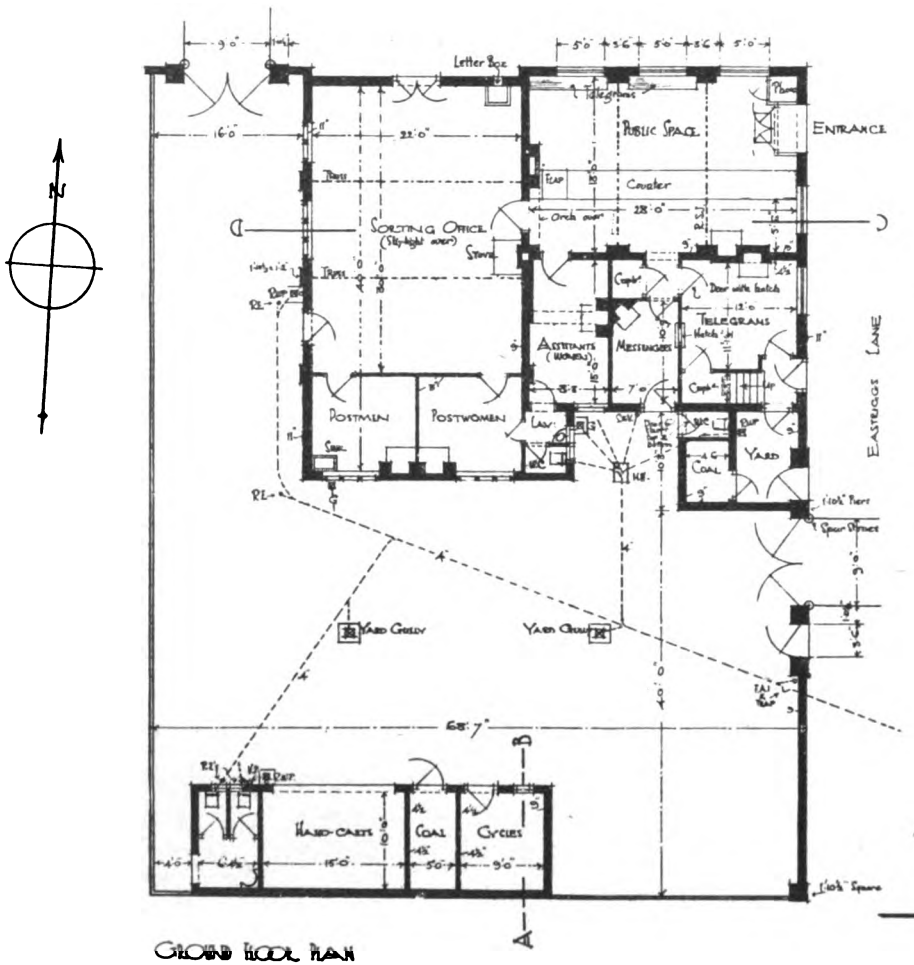


EAST ELEVATION

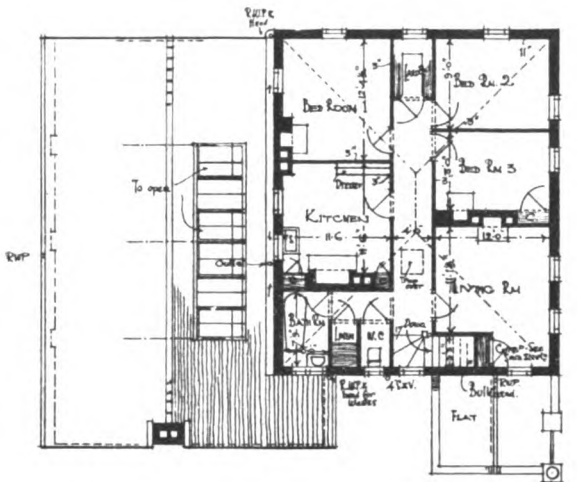
NORTH ELEVATION

WEST ELEVATION

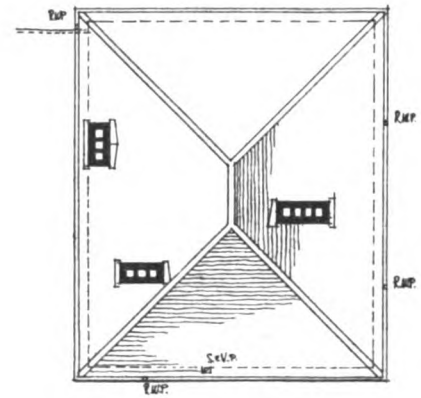
ANNAN ROAD



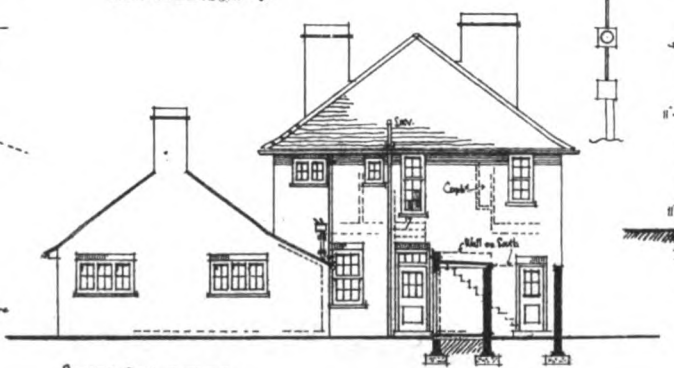
GROUND FLOOR PLAN



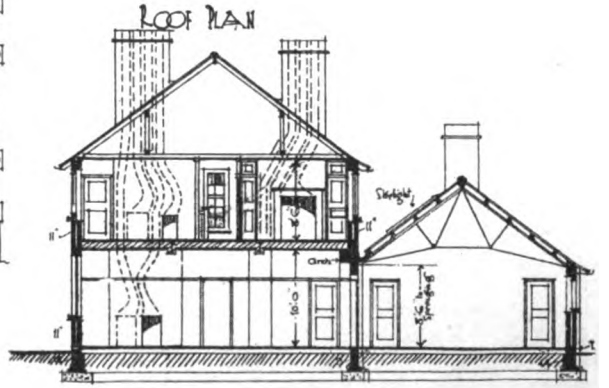
FIRST FLOOR PLAN



ROOF PLAN



SOUTH ELEVATION



SECTION C-D

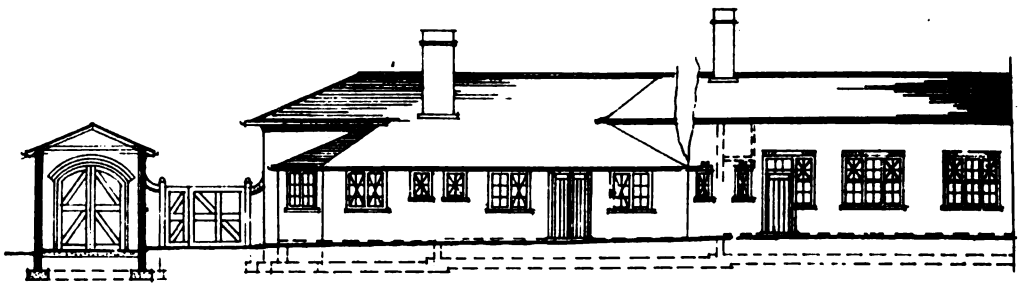
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The Architect, Nov. 8th 1918.

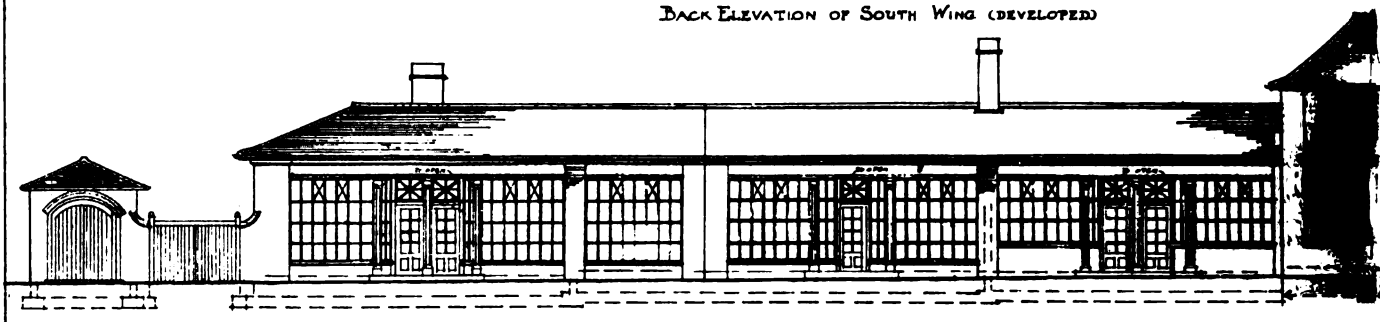


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Shops North and South of Institute, Eastriggs.



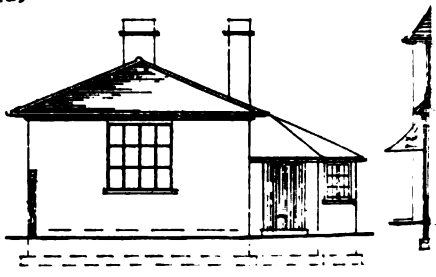
Back Elevation of South Wing (developed)



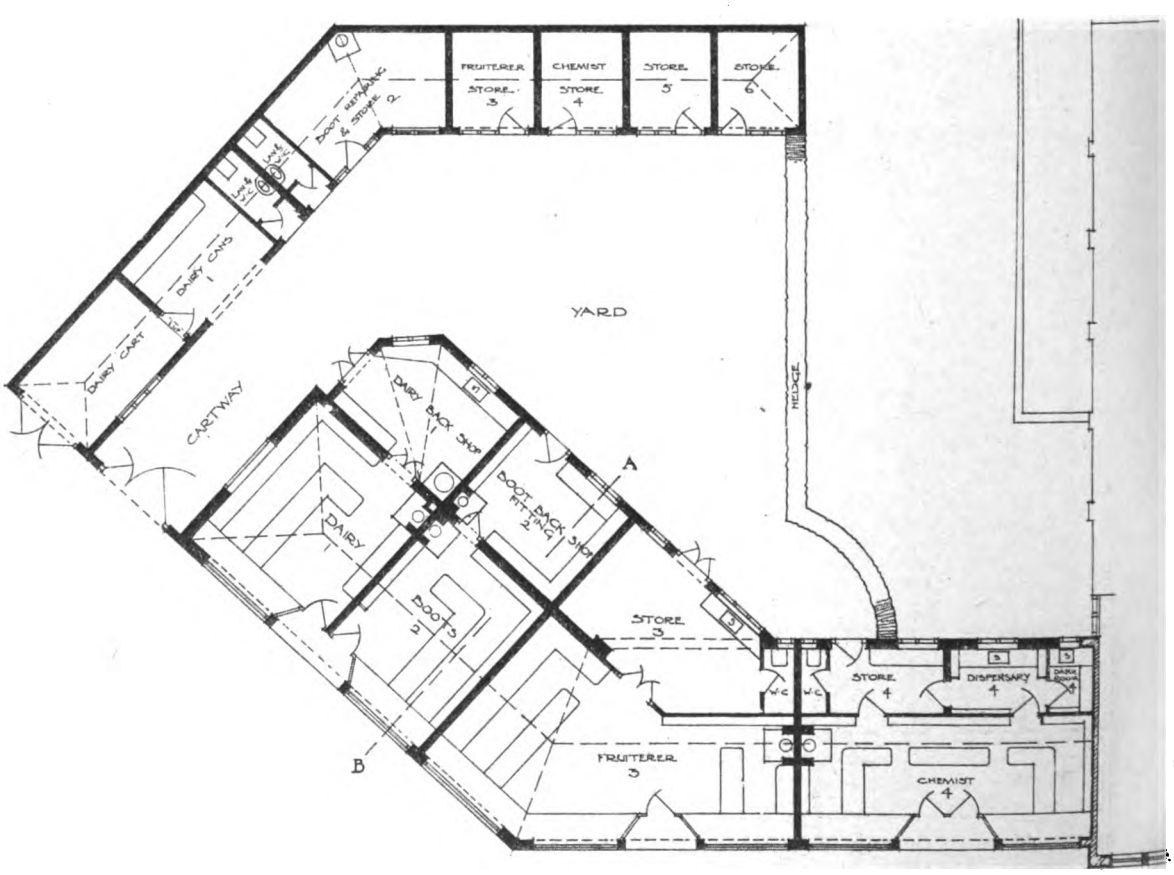
Front Elevation of North Wing (developed)



Elevation of North Stores (developed)

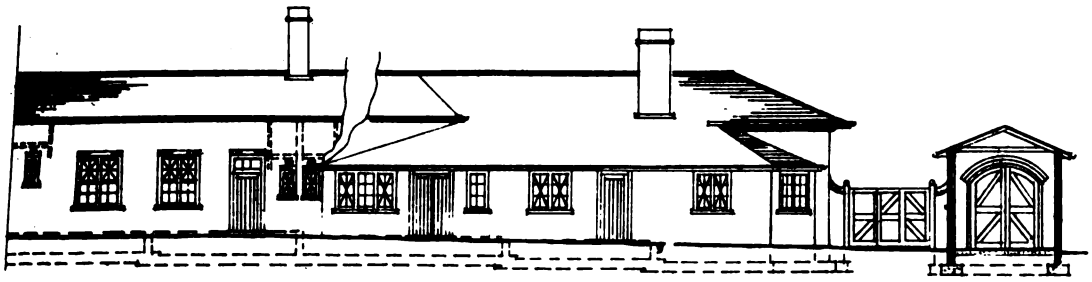


End Elevation of South Wing

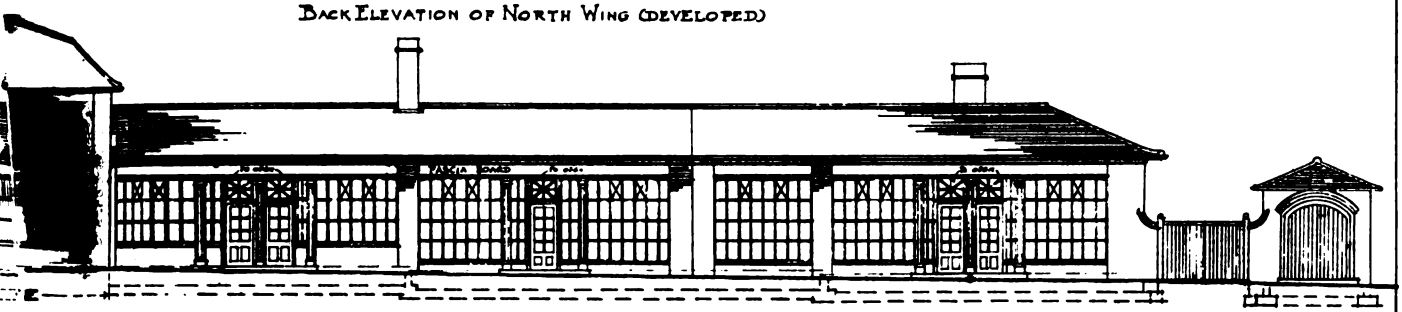


GROUND F

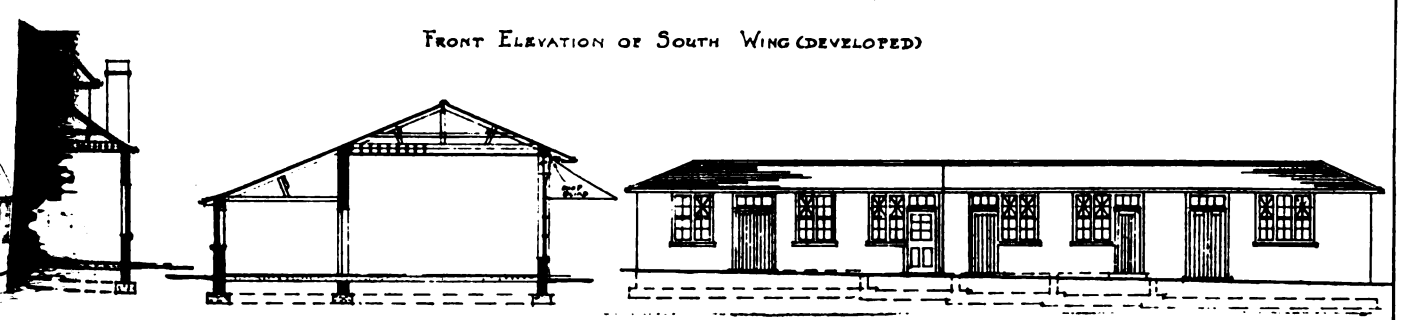
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BACK ELEVATION OF NORTH WING (DEVELOPED)



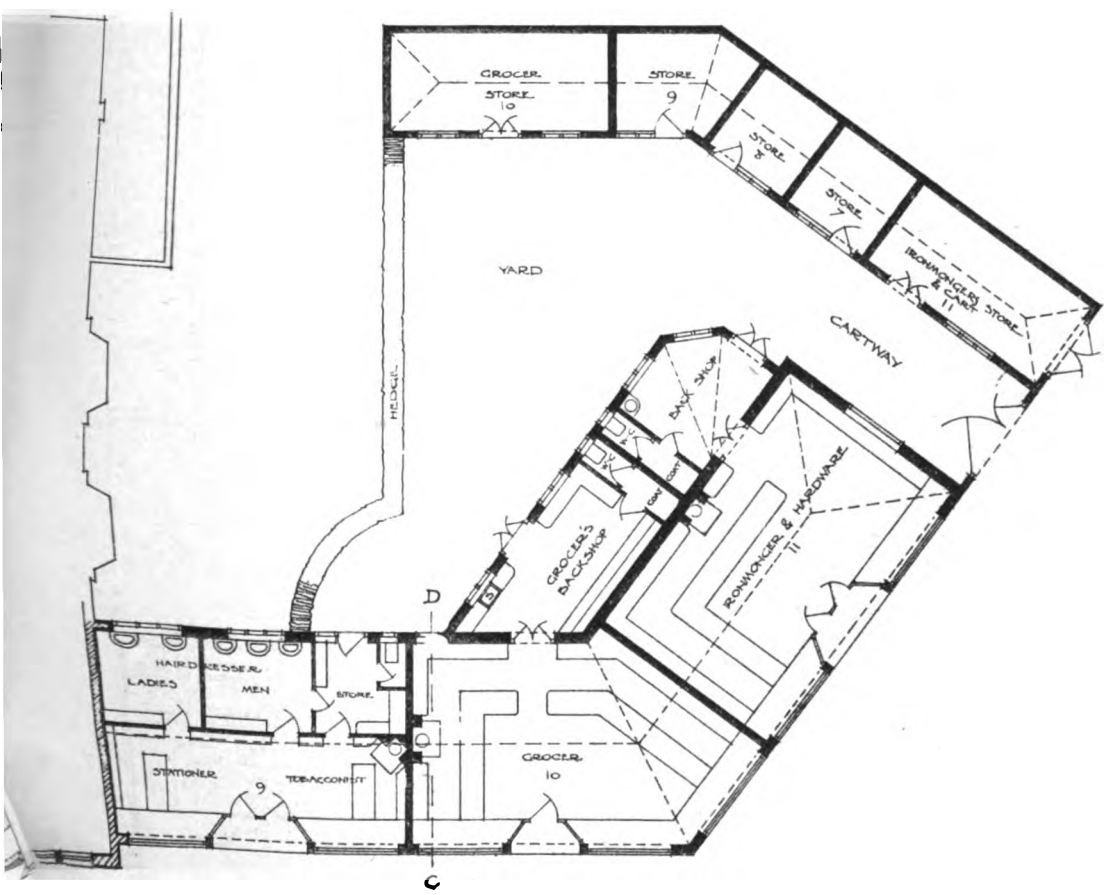
FRONT ELEVATION OF SOUTH WING (DEVELOPED)



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SECTION AB

ELEVATION OF SOUTH STORES (DEVELOPED)



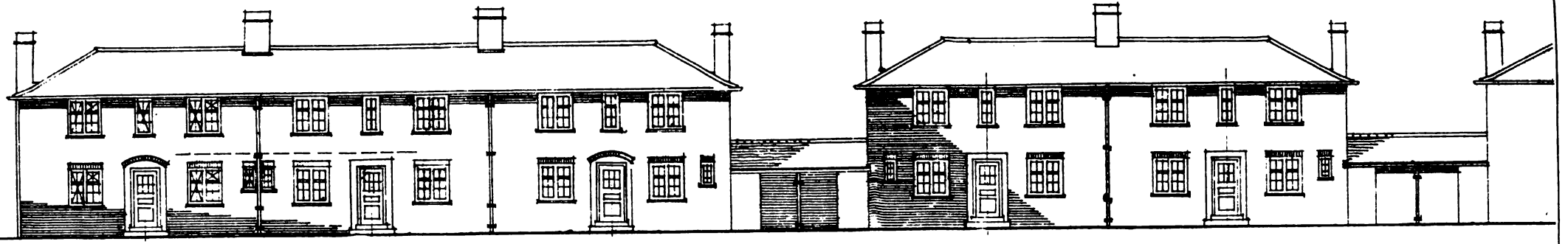
PLAN

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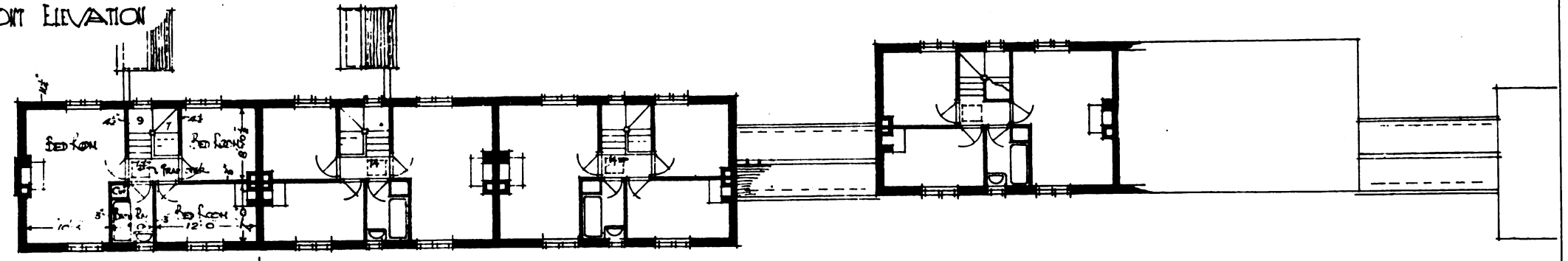
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...IGGS. GRETNA.

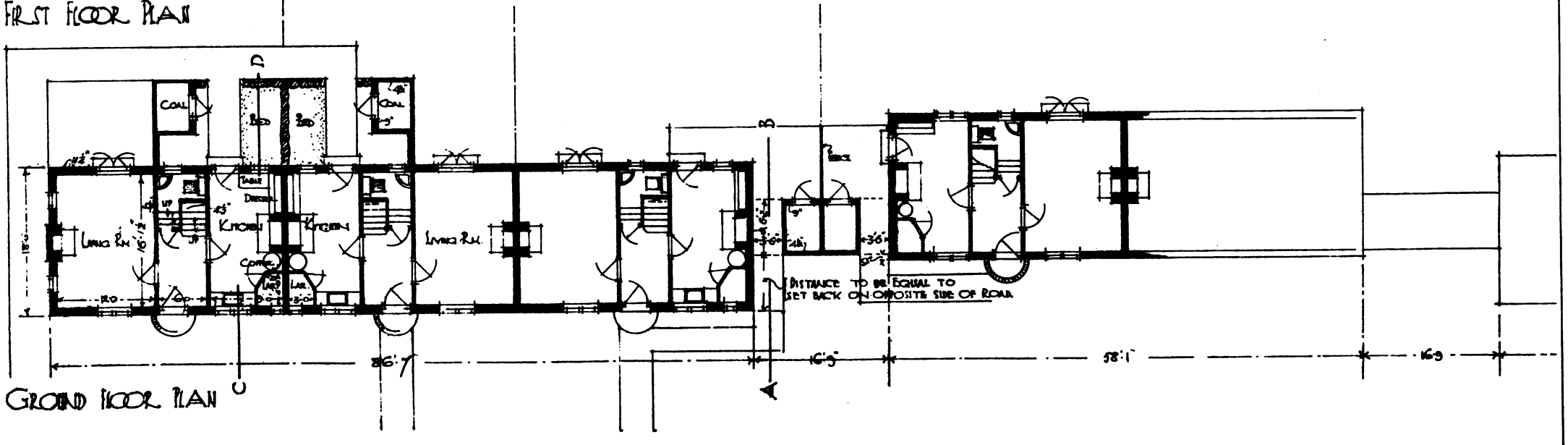
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FRONT ELEVATION



FIRST FLOOR PLAN



GROUND FLOOR PLAN

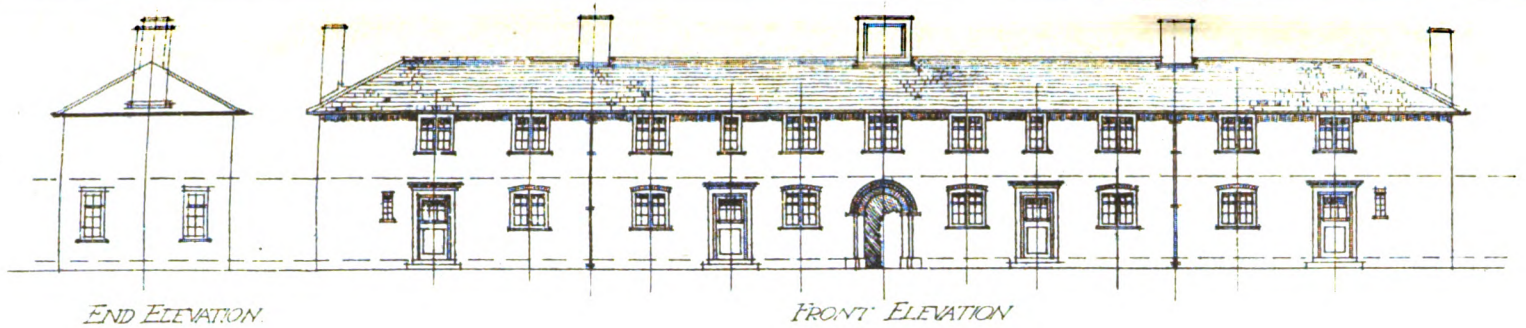
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COTTAGES, EASTRIGGS, GRETNA.

The Architect, Nov. 8th 1918

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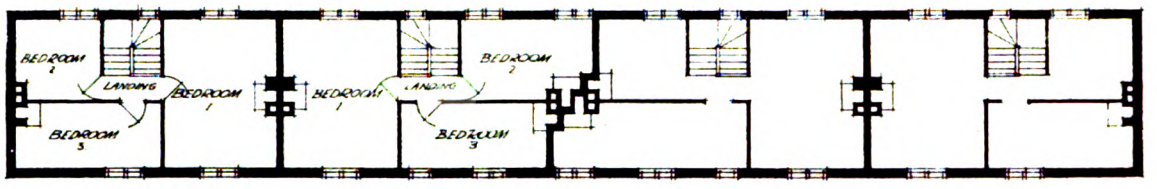
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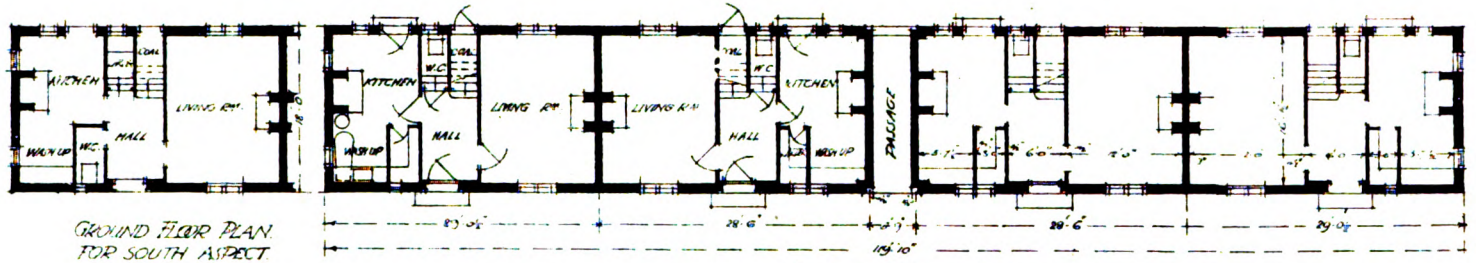
END ELEVATION. FRONT ELEVATION



SECTION. BACK ELEVATION



FIRST FLOOR PLAN.



GROUND FLOOR PLAN FOR SOUTH ASPECT.

GROUND FLOOR PLAN.

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REINFORCED CONCRETE.*

THE first edition of this book ran to 189 pages. The second edition runs to 260, of which 45 of the additional pages are accounted for by the inclusion of the L.C.C. Regulations. It is intended to be an introduction to the theory and practice of the simpler forms of construction in reinforced concrete.

Those who are familiar with the literature of this subject will realise that the Author has made good use of the data contained in "Everyday Uses of Portland Cement"; the Report of the Royal Institute of British Architects on Reinforced Concrete"; the L.C.C. Regulations with respect to the Construction of Buildings wholly or partly of Reinforced Concrete; Report No. 101 of the British Fire Prevention Committee; Kersten's "Der Eisenbetonbau"; and the 1909 Report of the Concrete Institute on Standard Notation. The writer does not appear to be aware of the publication (in September 1914) of the Second Report on Notation (see volume V., part 2, of the Transactions of the Concrete Institute).

The printer has done his work well, and the equations are well displayed, but in glancing through the pages we notice several points which the Author might remedy in subsequent editions. For example, the first edition (page 181) contained the error:—

a=*area* of the couple formed by compressive and tensile forces in a beam.

Curiously enough, this error occurs in the Author's book on "Reinforced Concrete Bridges" published in 1913 (page ix). It is still more curious to notice that it persists in the second edition of "Reinforced Concrete" published in 1918 and now under review, where the Author has made certain modifications but has retained the erroneous word "area" unchanged, so that in the folding sheet which follows the preface of the volume under review, and again on page 253, we have the error—

a=*area* of resistance moment in inches.

The correct form should be—

a=*arm* of the resistance moment in inches.

As the erroneous form occurs at least four times, it is hardly likely to be the printer's error in each and every instance. Again, on page 82, he states that a moment of resistance is the moment of a couple having an *area equal to a distance*. An area equal to a distance is not sense. An arm equal to a distance is intelligible. We notice that on page 253 it is stated that certain symbols have been added by the Author. But without this explanatory note we could have recognised some of the Author's additions by their misleading character, and by their breach of the rules given in the report which he claims to have followed.

For example, his d_d gives no clue to its meaning, and his a_c and a are a breach of the rule that areas shall be represented by capital letters. We also notice that on page 83 he uses D as a symbol for deflection, whilst in his list of symbols at the commencement of the book, and again on page 254, he states d_s equal deflection. He twice refers to the report of the Concrete Institute on Notation, but it is stated in the report, now more than four years old, that

Δ = deflection.

On page 255 we notice the equation:—

i = distance of eccentric load from outer edge of column section in inches.

i = (diameter-eccentricity).

Surely this is an error. Should it not be:—

Inset of load = (diam./2) − eccentricity; or

$i = (d/2) - e$.

In the recent edition of "Reinforced Concrete," the author has added some definitions taken from his book on "Reinforced Concrete Bridges"; but we notice, however, that he has withdrawn his amusing definitions of "stress" and "strain," viz.:—"The outer forces acting on a structure causing a movement in its component parts are called 'stresses,' while the inner forces resisting that movement and tending to hold the component parts in equilibrium are called 'strains.'" We wonder where he got this idea from. Perhaps it was his own. It is not Kelvin's; it is not Rankine's. The Author has modified several of his definitions in transferring them from his 1913 book to the 1918 book. He has slightly improved some of them, but the majority still betray some confusion of thought and inaccuracy of expression.

In 1913 his definition of the moment of resistance was identical with a proper definition of section modulus; but his amended definition is still inaccurate. He now states (page 82) that the moment of resistance is "the moment of a couple having *an area equal to the distance* between the centres of gravity of the tensile and compressive *stresses*." This is the fifth occurrence of this particular error. The definition should refer to a couple having an arm not an area. Moreover, the tensile and compressive stresses are weightless, and therefore have no gravity. We presume he is referring to the centroid of stress or the centre of stress as it is more commonly called.

Some of the other definitions are a little better than the foregoing, but we suspect that in these cases the author has not been so self-reliant. Perhaps we would not have mentioned these points, but we owe it as a duty to our readers to prevent them from accepting as quite good that which might be made much better. It is true that the second edition is an improvement on the first, but it is to be regretted that a book should be issued with such misleading definitions of the fundamental terms. We notice that on page 81 of the book under review the Author states that the neutral layer is commonly called the neutral axis. As a matter of fact the two things are quite different. The neutral layer is a layer of material reaching from one end of the beam to the other, but indefinitely thin, and not subject to compressive and tensile stresses of measureable magnitude, while the neutral axis is an imaginary line passing through the neutral layer at any given cross section of a beam.

The Author, in his chapter on loads, moments, stresses and resistance, &c., does not define stress or strain in general, and his definition of compressive strain and tensile strain are taken with slight modifications from his book on "Reinforced Concrete Bridges." In case any of our younger readers should need definitions of stress and strain which shall be more accurate than those put forward by the Author of "Reinforced Concrete Bridges," we would draw his attention to the following:—

(*a*) The equal and opposite action and reaction which take place between two bodies or two parts of the same body transmitting forces constitute a stress. The intensity of the stress at a surface, generally referred to with less exactness as merely the stress, is estimated by the force transmitted per unit of area.

(*b*) Strain is the alteration or shape or dimensions resulting from stress.

These definitions, which are from "The Theory of Structures," by Professor Arthur Morley, have been selected for their precision and comprehensiveness, out of many which are available, and generally to the like effect.

In conclusion, we notice that the Author expresses some opinions as to the safety factor provided by the L.C.C. Regulations, but the authorities are not likely to be perturbed by the opinions of an Author who is so uncertain on the very rudiments of stress and strain.

* "Reinforced Concrete: Theory and Practice." By Frederick Rings, M.S.A. Second revised and enlarged edition. (London: B. T. Batsford. 10*s.* 6*d.*) 260 pp., 8½ inches by 5½ inches and two charts.

THE Institut de France has awarded the Prix Cuvier to Dr. Arthur Smith Woodward, F.R.S., Keeper of the Geological Department of the British Museum. This is the fourth occasion that the award has been made to an Englishman. The previous recipients were Sir Richard Owen, Sir Roderick Murchison, and Sir John Murray.

AT a meeting of the Royal Society of Edinburgh the following were elected:—President, Dr. John Horne; and vice-presidents, Professor D'Arcy Thomson, C.B.; Professor James Walker; Professor George A. Gibson; Dr. Robert Kidston, Professor D. Noel Paton, and Professor A. Robinson.

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THE SOCIETY OF ARCHITECTS.

By F. Lawrance.

Interior and Exterior Painting under War Conditions.

If we have to adopt as inevitable a partially unsatisfied need for preservation of our buildings, we can at least give careful consideration to that amount of interior and exterior painting with which it is still possible to proceed, particularly as regards the selection of material. It is not merely a question of new materials against old ones, for some of the materials which are used almost universally to-day for certain purposes have been obtainable for years, but have been persistently rejected by some painters through sheer prejudice, whilst others equally old, not procurable to-day, were adhered to because their use was traditional.

Notes on the Functions Fulfilled by the Ingredients of Paint.

(1) *Pigment.*—Mainly useful as a colouring agent, but also acts to some extent as a filler in combination with the binder.

(2) *The Binder* (generally oil) is used to hold the particles of pigment together, and also helps to secure a smooth protective coat. The binder is also a filling agent on porous surfaces, the oil entering the pores of the surface while in the fluid state, and then oxidising to a leather-like substance (see driers) and thereby stopping suction. The quantity of oil also regulates the gloss.

(3) *The Thinner* is added with a view to rendering the paint more fluid in consistency, making it more workable and more penetrative into absorbent surfaces. Turpentine used in paint for priming woodwork has the effect of slightly dissolving some of the natural resin in the wood, thereby bringing about a secure attachment between the paint and the wood, but it should not be used in excess at the expense of the filling properties of the paint. Spirit acts indirectly as a drier, because it allows the oil to be spread over a larger area—i.e., exposes it to a larger amount of oxygen—and, therefore, hastens the drying.

(4) *The Drier.*—Linseed oil is said to dry when it becomes oxidised. By combining with oxygen it undergoes a chemical and physical change, a leather-like solid taking the place of the liquid. This action does not stop as soon as the paint feels dry, but goes on for a great length of time, until the paint perishes. Therefore, it will be clear that the longer the paint takes to dry the longer it is likely to last. Driers are added to paint to assist the oil in drying, so that the surface will be hard in a reasonable time, but it will be seen from the above remarks that an excess of drier is very undesirable, and will cause early perishing or cracking. An excess of drier often delays hardening, because the surface of the paint dries so quickly that it forms an impervious layer that effectually prevents the paint immediately under this skin from drying, as it cuts off the supply of oxygen.

General Notes on Driers.

It is necessary to reduce the common drying agents, as they are so strong in their native state that the quantity could not be easily gauged if used full strength.

The methods of reducing are as follows:—

Patent Driers—with barytes, whiting, &c., and ground in oil.

Terebine—with spirit and a little oil. (In this case the drier is held in suspension by the addition of rosin or other resinous matter.)

Liquid Oil Drier—with oil and a little spirit, also usually a small quantity of resinous matter.

Powder Driers—with fine pigments such as zinc oxide.

The following notes indicate the merits of the different methods:—

Patent Driers.—In order that this drier can be added to dark colours as well as white, it is necessary that the reducing agents shall have little body or opacity; this, of course, reduces the opacity of the paint, and, unfortunately, the pigments that are generally used (as above) are often detrimental to the durability of the paint. Another drawback to patent drier is that it is not a standard article. It should be noted that in some cases there is a quantity of undissolved drying agent in suspension, and drying action is delayed until this dissolves in the added oil (when the paint is mixed up), when drying proceeds more rapidly. In consequence, an apparently slow drying paint often hardens rapidly afterwards, and even becomes too hard. From this it follows that paint mixed some time before use will generally give more uniform drying results.

Terebine.—The evaporation of such a large quantity of spirit, leaving behind chiefly resinous matter, is very apt to cause cracking by shrinkage, and, therefore, this class of driers should be used sparingly. It is more suitable for paints for ironwork than for woodwork.

Liquid Oil Driers.—It will be seen that the reducing agent here is the least detrimental because the evaporation of the small quantity of spirit is counterbalanced by the expansion of the oil, which is the chief extender; moreover, the oil possesses elasticity and protecting power. The drying action is very uniform, and the drier is standardised, inasmuch as manufacturers usually keep to one formula, and when a good make is obtained and used regularly the painter can always depend on equal results. Liquid driers are particularly suitable for zinc paints.

Powder Driers.—It is against good principles to add powder to paint, as absorption of oil by the pigment is likely to occur after the paint is applied, causing the paint to go flat. Drying is not uniform, as it is difficult to get perfect mixture without grinding.

Goldsize.—This is sometimes used as a drier, especially for flat paints, as it is a good binder. It is really a quick drying varnish. An excess of goldsize will cause cracking, especially if used over oily coats.

Priming.

The functions of a priming paint vary according to the material undergoing treatment, but they may be broadly set out as follows:—

(1) *On Absorbent Surfaces.*—(Wood, plaster, &c.) To stop suction and fill up the pores of the surface with a tenacious material to which subsequent coats will adhere firmly.

(2) *On Surfaces Liable to Corrosion.*—(Iron, &c.) To form a coat which is practically impervious to the corroding agent (water or other fluids), and also, if possible, to prevent corrosion by neutralising the corrosive substances. In cases where little or no suction is likely to take place (on zinc, for instance), the paint must also be of an adhesive nature.

(3) *On Non-Absorbent and Non-Corroding Materials.*—(Glass, &c.) To form a foundation which will adhere firmly to the surface, the adhesiveness of the paint itself being depended upon for this purpose. Also to leave a ground to which subsequent coats will adhere.

(4) *On Surfaces that have to withstand Heat.*—(Radiators, baths, &c.) To form a covering consistent with clauses 2 and 3, but with materials that will not soften under the influence of heat.

A paint for any surface must present sufficient elasticity to enable it to expand and contract with the material to which it is applied.

It will be seen from the above notes that absorbent surfaces under normal conditions present the most satisfactory grounds for painting on, as the paint becomes dovetailed as it were into the surface, and is not entirely dependent on surface adhesion.

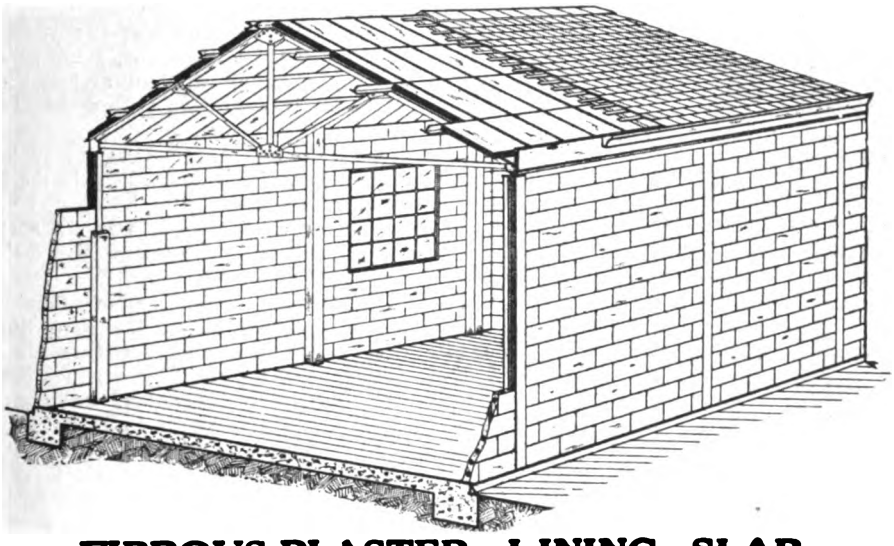
Generally, surfaces presenting great absorption should be primed with paint containing a large proportion of oil, because oil has good filling properties, moreover it may be rounder than for materials offering less suction. The latter should have turps or spirit added, and can be thinner to aid penetration. When the suction is not sufficient to allow the paint to enter the surface, treatment under heading 3 is preferable, i.e., the use of an adhesive paint.

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Brugge-Zeehaven

A RETROSPECT AND A FORECAST.

The History of Zeebrugge in brief, from the Origin of the Movement for its Creation.

By JOHN A. RANDOLPH,

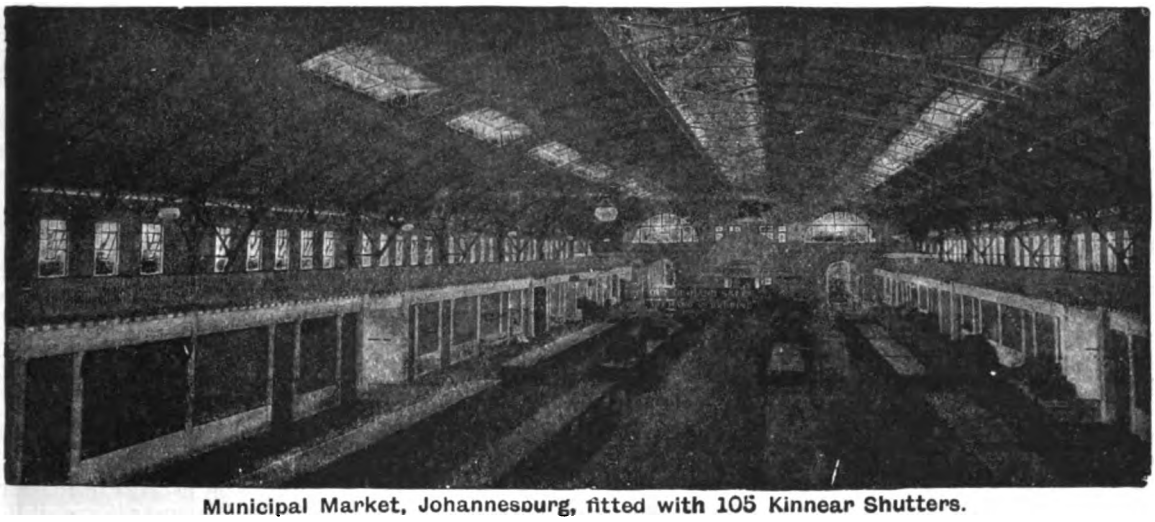
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The pigment in priming acts in several ways, viz. (1) as a filler, (2) combines with the vehicle to form an impervious layer, (3) acts as a colouring agent, thus assisting in the final obliteration of the surface, (4) in some cases assists in preventing corrosion by neutralising corroding agents.

The priming is the most important coat, as it is the foundation coat.

(To be continued.)

CORRESPONDENCE.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

The Finance Act, 1909-10.

To the Editor of THE ARCHITECT.

SIR,—The only reason why you are not inundated with correspondence is that you traverse the ground so well yourself. But it may all be summed up in "Repeal the 1909-10 Finance Act," and to show my *bona fides* I would, myself, do my little, in building, if that Act were cancelled.

I have recently perused the conditions of sale of a part of a gentleman's estate dated 1830. The salient conditions were: "The houses should be 30 ft. high to the eaves and should be built quite up to the edge of a street (30 ft. wide)." If these were the best conditions conceivable a century ago, for good-class property, and which we now consider little better than slum property, is it not possible that, if we build all our houses to-day on our best-laid schemes, they may be obsolete in a comparatively short time If, for example, electricity were able to revivify the air, so that rooms may with advantage be seven feet high? If all lighting, heating, and labour were carried out by electricity, certainly projecting chimney breasts would be a costly waste of material and labour.

Then many of our Councils plan streets for cottages up to 120 feet wide, with 8 houses to the acre, and then talk of communal kitchens. They would want one for every two houses, unless they had half a mile to walk. Then, are the ratepayers generally, including other cottagers, to pay for keeping up, and watering, streets 120 feet wide for the better class of cottage? It is better to do that than to breed C 3 men, certainly. But C 3 men cannot afford to live in these cottages, and yet it is these very men who will have to pay their rates, in their rent, for these cheaper cottages, to pauperise the skilled artisans, who can afford to pay an economic rent, but who are to receive a subsidy. Better far to subsidise the poorest citizens whose precarious wage compels them to live in, or make, slums.—Yours, &c.,

W. H. WOOD.

Queen Square House, Leeds: Oct. 29, 1918.

GENERAL.

THE will has been proved at £19,900 of the late Mr. H. J. Curry, surveyor, of the Zetland Hotel, Saltburn.

THE Barnard Castle Urban Council have decided to erect twenty-four houses at the termination of the war.

THE death from influenza took place on Friday last of Mr. G. M. Buscombe, head of the firm of J. Buscombe & Sons, builders and contractors, St. Nicholas Street, Bodmin.

THE Gas Committee of the Dundee Town Council have decided to affiliate with the British Commercial Gas Association and to pay a subscription of £50.

MR. DUNCAN CLARK, A.R.I.B.A., of Colchester, has been appointed architect and surveyor to the Archdeaconry of Colchester.

THE Bootle Town Council have made application to borrow a sum of £32,825 for the purpose of purchasing land for their housing scheme at the termination of the war.

A MARBLE tablet has been erected and unveiled in Finzean parish church in memory of the Right Hon. Robert Farquharson, M.D., L.L.D.

A COMPANY has been registered under the name of Bain & Brown, Ltd., Leith Walk, Leith, with a capital of £30,000 to acquire and carry on the business of builders and contractors.

IT is estimated that about £3,000 will be spent in reconstructing and equipping as a technical school the premises in Dublin Street, Carlow, known as the Assembly Room, which Mr. George Bernard Shaw has given for the furtherance of technical education.

ON Friday night last an interesting lecture was given by Mr. J. R. Wigfull, A.R.I.B.A., at the Sheffield School of Art on Local Examples of Mediæval Architecture illustrated with lantern slides.

THE Burnham (Essex) Rural Council at their last meeting reported receipt of a letter from the Local Government Board stating that their inspector, Mr. Chapman, would visit the district to discuss the question of the provision of housing for the working classes after the war.

PRIVATE WILLIAM A. HUNTER, London Regiment, has died of wounds received in action. He was the youngest son of Mr. James Hunter, granite merchant, King Street, Aberdeen, and prior to joining up was an architect and surveyor engaged in the Land Valuation Offices, Aberdeen. He had been twice previously wounded.

THE Manchester City Council by 81 votes to 17 have decided that the old infirmary site in Piccadilly is the best possible site for the new Art Gallery to be erected as a memorial to the men who have fallen in the war. A special committee has been appointed to secure competitive designs for the building.

MR. THOMAS H. MORDEY, shipowner, of Dominion Buildings, Cardiff, has presented Ebley Mansion, Stonehouse, Gloucestershire, to the National Institute for the Blind to be used as a college for the higher education of blind girls. The mansion is a large one, having cost £30,000 to build and stands in grounds of eight acres.

THE Grays (Essex) Housing and Town Planning Committee recommend that the Council defray the legal expenses of owners of land to be purchased for the housing scheme; also the surveyor's fees up to thirty guineas. They further recommended that an architectural assistant to the surveyor be appointed, and a list of applicants for houses opened; and that steps be taken to appoint a town-planning architect. Mr. Goddard moved the adoption of the recommendations, and said they would have to pay the owners' legal expenses in any case. The report was adopted; and it was agreed that the salary of the architectural assistant should be from £200 to £250 a year.

RIPON is a centre for a very large number of troops mostly in the convalescent stage. An educational scheme has been formulated so that the time on their hands may be put to good advantage. A series of lectures has been arranged under the patronage of Lieutenant-General Sir J. G. Maxwell, G.C.B., K.C.M.G., C.V.O., D.S.O., G.O.C., Northern Command; Brigadier-General W. H. L. Allgood, C.M.G., D.S.O., G.O.C. Ripon Reserve Centre; the Right Rev. the Lord Bishop of Ripon, and the Ven. the Archdeacon of Richmond, D.A.G.G. Northern Command—the Ripon Diocesan Board of Welfare for the Troops have allowed their commodious church institutes to be used. Among the lectures already delivered to crowded audiences have been "Housing, Health, and Education," by Mr. F. J. Adkin, M.A. (Cambridge); "Industry After the War," by Captain W. E. Grey, formerly War Correspondent of the "Morning Post"; "The Whitley Report" and "The True Basis of Reconstruction," by Mr. J. S. R. Phillips, Editor of "The Yorkshire Post"; whilst other lectures dealing with reconstruction are: "Canada and the Future of the Empire," by Dr. G. E. Lloyd, formerly Archdeacon of Prince Albert, Saskatchewan, and Principal of Emmanuel College, Saskatoon; and "Architecture After the War" and "Town Planning," by Professor C. H. Reilly, M.A. (Liverpool University). Among lectures on general subjects arranged for the period up to Christmas are "Music and Singing," by Major Walford Davies, R.A.F., organist of the Temple Church, London; "The American War of Independence," by Professor Grant, of Leeds University; "The Social Life of Insects and Animals," by Professor Garstang, of Leeds University; "The Beginnings of the Drama," by Professor Moorman, Leeds University. Others who have promised to deliver short courses (mainly in the New Year) or single lectures, are the Right Rev. Bishop Welldon, D.D., Dean of Durham; the Earl of Denbigh, C.V.O.; the Ven. the Archdeacon of Richmond, Mr. Robert Holmes (author of "Walter Greenway" and "My Police Court Friends with the Colours"); Mr. Ernest Barker (Fellow of New College, Oxford), and Mr. John Drinkwater, general manager of the Birmingham Repertory Theatre. As many of these lectures are to have the additional attraction of lantern slides, it will be seen that the course, whilst representing almost every side of English higher education, will, whilst giving particular pleasure, give a stimulus for further study.

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THE ARCHITECT
AND CONTRACT REPORTER

VOL. C.—2604. NOVEMBER 15, 1918.

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November 11, 1918.

By the united efforts of the free nations of the world, bound together for the achievement of a great end, the most sinister plot ever devised against the liberties of mankind has been successfully frustrated. We owe the liberty which we have preserved more to the heroism of those who have fought by land, sea and air than to the skill of statesmen or the diplomacy of Governments. Millions have died, but not in vain if we preserve that for which they have given up their lives—liberty and justice for all. We can truly say that no British Government would have gone to war to gain territory, and much as she longed for the reunion of the provinces torn from her in 1870, France would not have invoked the arbitrament of the sword to attain her ends, nor would Italy have striven by violent means to secure the unity of the Italian race. Now that all has been achieved by a united effort to meet a common danger, the least that we can do is to banish internal faction and strife, to consecrate the results obtained by sacrifice and effort which have not been equalled in the whole history of the human race.

As the world has not been saved by statesmanship in war it will not reach its highest destinies by the means of politics, but what those who have fought have achieved has its counterpart in the future in ends the rank and file of the nation can win to by individual effort and determination in the long era of peace which is now opening before us. We refer in a second article to what is undoubtedly the crux of the coming era—the elimination of waste by the harmonious co-operation of all. If we obtain this the wealth produced by the community will make good the losses of war, and enable our people to attain to a comfort and higher development which has been impossible in the past. If we neglect the opportunity we may expect to have social problems thrust on us which are utterly insoluble, and we shall in the course of a few generations be numbered among the derelict peoples of the earth. Labour is so strong in democratic countries that it is utterly impossible for Capital to act in a narrow-minded or intolerant manner, and those individuals who attempt to do so will justly earn the unstinted condemnation of the community; but even Labour is subject to the operation of inexorable economic laws, and a refusal to recognise them will lead to disaster. Every man should be well paid for what he does, but no legislation or interference with liberty can turn a loss into a profit. It is necessary if we wish to sell our goods abroad to be able to produce them as cheaply as our foreign rivals; it is necessary if the people wish for better conditions of life that they shall acquire by industry and intelligently directed effort the wages which alone will make them free and independent citizens. If they do this they will be independent of Governments; if not the most democratic and revolutionary administration cannot help them.

We hope that the vast web of Government control and interference with the rights of the community will be swept away at a very early date, and that whatever Government the next few weeks may give us will recognise what we are sure is the unquestionable wishes of the people. We do not wish to refer to mistakes that have been made during the last few years, for we know that in the abnormal conditions created by war the powers exercised have been necessary, but with the coming of peace we all feel that the people themselves and not its Government are the arbiters of their future destinies.

All we want from Government is good administration and the elimination of waste. Paternal despotism whether of an autocracy or democracy is out of date. The people have fought the war, the people have paid for it, and it is the people who will build up the future destiny of the race.

Governments are not omnipotent or all wise, and the field of the duties they alone can perform is great enough to satisfy the most unbounded ambitions. During the next year we shall probably see the boundaries of a new Europe settled in conformity with the aspirations of races now for the first time free, while the reform of our existing departments and their functions is a heavy task in itself.

Then again there is the settlement of the new relations of our great Dominions with the Mother Country, and the whole complicated system of the reorganisation of the commercial conditions under which our future trade will be carried on. These and not the interference of Government in the daily lives of the people are what we wish from those in authority. The solution of the one problem which we deal with this week, which is in the hands of the people themselves, will bring in its train results which will render the activities of the Ministry of Reconstruction and of the future Ministry of Health largely unnecessary.

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Illustrations.

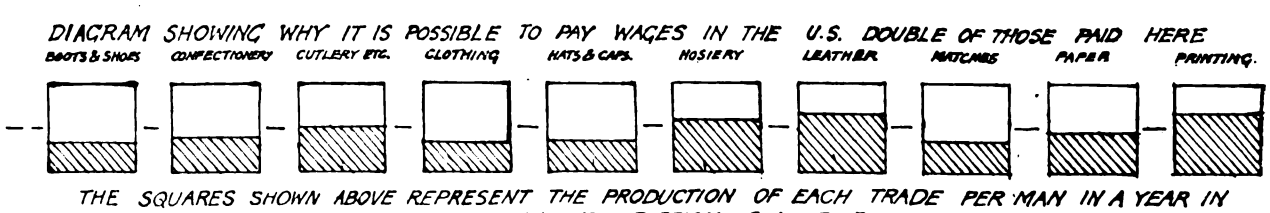
DOORCASE AND PANELLING OF A ROOM REMOVED FROM CLIFFORD'S INN.
END OF SALOON, CARRINGTON HOUSE.
THEATRE, NANCY.—DECORATIVE MODEL.—M. HORNECKER, Architect; M. RAGON, Sculptor.
HOUSE AT TADWORTH

The Vital Question.

THE vital question on which the prosperity of this country will depend after the war is not one which politicians and governments can solve, but one which a very little reflection will enable anyone to determine for himself. If we act wisely we shall reach a stable and assured condition of prosperity; if we neglect the lesson of facts and place our trust in the electioneering promises of politicians we shall lose our place in the ranks of great progressive communities, and shall be burdened with an ever-increasing amount of poverty and hardship that no legislation can remove.

The essential fact which we have to bear in mind is that the workers in the United States were before the war in receipt of wages from two to three times as high as those paid here in similar trades, and yet the selling price of the majority of the goods made by them was, if anything, less than that charged here. Consequently the average American workman had from two to three times the income of his rival in this country, while the American employer on the whole obtained a better return on his capital. Nor was this result achieved by the process known as "slave driving," for the Americans working hours are, as a general rule, shorter than those to which we are accustomed in England. We give a comparative table of the yearly production per man, inclusive of raw material, in ten trades in this country and in America, in which the value of the goods produced in America amounted to £5,664, as opposed to £2,757 produced in this country. Now while the percentage obtained on the average earnings of capital in the United States is greater than it is here, it represents an outside figure of 10 per cent. on invested capital, while the difference in wages is from 100 per cent. to 200 per cent. It can hardly be doubted that the American working man has solved a problem which is vastly more important to his welfare than any cleverly devised scheme for providing him with house accommodation at an uneconomic rent, or any of the various panaceas so skilfully dangled before his eyes by interested politicians or clever theorists. And this result has been possible, firstly, because Americans have used the best mechanical aids to production, and have scrapped obsolete and defective machinery when better has been invented. This is the employers' problem and task, together with that of efficient management. The second, and still more important consideration, is that in America there has not during the last thirty years been any limitation of output and labour as well as capital works for high production. The objections to doing so which are sometimes urged are unsound. It is argued that under a system of high production there is less to go round, but it is obvious that the cost of the commodities produced under a more intensive system tends to bring down prices, while the wages paid being higher create a greater spending margin among the workers themselves, as they are not restricted to necessaries only, but can purchase comforts and luxuries. If wages were doubled all round workers could either increase their expenditure, or save and invest the difference, or both.

Unfortunately politicians all over the world have axes to grind, and it is far more telling to pose as the *deus ex machina* without which nothing can be done than to speak the truth and tell men that their destinies are in their own hands. A very large majority of political measures are less useful than the proverbial bread pills of a physician, while most of them contain some harmful ingredient. For as experience proves, men are sometimes cured by faith, while we know of no instance in which popular faith in a political measure has affected its success. To show how little the worker is benefited by low production we quote some figures given in a little work by Samuel Turner, which deal with the comparative costs of a block of cottages here in 1885 and 1912. In the former year the cost of labour was £708, in the latter £1,750, and yet the actual increase of wages paid at the later date only accounted for £98, while the restriction in output accounted for £943. And we all know that the high cost of building tends to lessen the amount of work executed, and so contracts the market of labour. But when dealing with the question of bricklaying there are yet further economies which can be effected if we are not too stubborn in our conservatism and prejudices. Mr. Gabraith, who investigated the motions of a bricklayer, found that many of them were unnecessary, and could be eliminated and simplified, and on a test being made it was discovered that the same amount of work could be done by a third the number of men employed if the new and simplified motions were adopted. In this case it is obvious that an employer would be better off if he paid bricklayers two and a half times the wages at present provided they made full use of the improved methods. We do not know whether it will be found that similar economies of time can be effected in other trades, but it is quite possible they might, and if so the workers have it in their power to greatly increase their wages, and also by so doing to stimulate the demand for labour, again reacting on wages. And by reducing the cost of any article manufactured or of any building we bring it within the means of an increasing number of people, and so stimulate demand. Nor need anyone be afraid that the so-called capitalist—who may be an association of working men—will reap an undue advantage, for if the cost of building could be halved by improved methods, rents would very nearly be halved also, because the only other item to be considered would be the cost of the land which would presumably be the same. So in every way we must gain by high production which creates more work at less cost, rendering it easier for labour to buy what it requires cheaply. The workers of this country, whether the so-called employers or those who assist them in various capacities, have it within their power to produce a new world, the wealth of which will be incomparably greater than any which governments can devise, or alternatively we can maintain the bad methods of the past, and see our country out-distanced in all that makes life worth having by those competitors who place more trust in facts than in theories, and who do not throw aside the bone for its reflection in the stream.



THE SQUARES SHOWN ABOVE REPRESENT THE PRODUCTION OF EACH TRADE PER MAN IN A YEAR IN THE UNITED STATES THE HATCHED PORTION SIMILAR PRODUCTION IN THE UNITED KINGDOM. 1907 & 1909.

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THE SURVEYORS' INSTITUTION.

The Opening Address by John Hubert Oakley (President), on November 11.

I DESIRE to take the opportunity afforded by the delivery of the Presidential Address, with which it has been customary for the Institution's Session to be opened, to thank every Member of the Institution, whether present or or absent, for the great honour they have conferred upon me in placing me in the responsible position I now occupy.

I am well aware that I do not owe this distinction to my special personal merit or qualification, but to the fact that ever since I entered my father's office, just over thirty years ago, I have been in close touch with the Insitution as Student, Professional Associate, and Fellow, qualifying for each step by examination, and finally have for the last eleven years obtained experience in the Institution's affairs as one of your elected representatives on the Council. I also fully realise that I am indebted to many kind friends, both of my father and myself, for holding out a helping hand, and for giving me opportunities without which I, like many others some far better qualified than myself, would nevr have reached this position, or at any rate not for some years to come.

I am aware how loyal has been the support accorded in the past to occupants of this Chair, both by the Council and by the body of Members, and I feel every confidence in asking you to continue that support to me. I can assure you that, whatever my shortcomings and deficiencies may be, no one has the interests of the Institution and its Members more closely at heart, and it will be my aim to do everything in my power to further the interests of both during my year of office and subsequently.

Many Presidents in the past must have experienced a doubt as to the subject which they should select for their Opening Address; but I have been spared any difficulty on that head. It has not seemed to me that there could be two opinions as to the subject upon which I should address you this afternoon. The Institution has just completed its fiftieth year, and its Jubilee seems undoubtedly to call for a sketch of its activities since its foundation in 1868, and some consideration as to the manner in which the aims of its founders have been carried out.

Even in normal times only a small percentage of our Members can attend the Opening Meeting, and in present circumstances the number must be still smaller, but I sincerely hope that Members in all parts of the kingdom will read this record of the Institution's fifty years of life however poor my effort in bringing it before them may be.

My reason for making an appeal is because in the course of my visits to different parts of the country in connection with my business I have formed the opinion that a substantial—I will not say a large—percentage of our Members do not realise the importance of the work which the Institution has done and is doing, nor how the demands upon it increase almost from day to day. In order that it should retain its present status, and should be in a position to meet the ever-increasing calls upon it, it is, I venture to say, essential that each one of its Members should feel himself part of a virile and living body, and realise how greatly the strength and usefulness of that body must depend upon the support and work of individual Members.

In the first part of last century the profession of surveyor, as at present understood, was almost unknown, or, at any rate, occupied a very different position from that which it now holds. But the great development of every kind which synchronised with the early part of the Victorian era, the development of railways, the land enclosures, tithe commutation, copyhold enfranchisement, the Poor Law Acts, and other important legislation connected with land, all gave rise to additional demands for the services of men having a knowledge of these matters, and in a position to advise upon the intricate and difficult questions connected therewith.

As a result various professional associations were formed, such as the Land Surveyors' Club (1834) and the Surveyors' Association (1864), though a still older body, the Surveyors' Club (the membership of which was mainly confined to building surveyors), was established in 1792. But these bodies, though confined to the profession, were necessarily limited in membership by the fact that the meetings took the form of their members dining together at certain intervals, with the result that by degrees they developed the social rather than the professional aspect. The advantages obtained from these informal gatherings pointed to the probability of still greater advantages being derived from an association more distinctly professional in character, and including within its membership all persons possessing the necessary training and qualifications.

A meeting of those likely to be interested was therefore called on 23rd March 1868, when the following resolutions were passed:—

"1. That it is expedient that an association be formed to be called 'The Institution of Surveyors.'"

"2. That the undermentioned gentlemen do, with this object, form themselves provisionally into such an association, and take the necessary preliminary measures for organising the Institution, viz.: Messrs. Chas F. Adams, Virgoe Buckland, Wm. Jas. Beadel, Fredk. Jas. Clark, Edward Norton Clifton, John Clutton, Henry Crawter, John Bailey Denton, Robert Collier Driver, Richard Hall, Thomas Horsey, Henry Arthur Hunt, Thomas Huskinson, Jeremiah Matthews, John Oakley, Edward Ryde, Edmund James Smith, William Sturge, George Trist, and Francis Vigers."

A committee was formed to draw up by-laws and regulations, which were adopted at a meeting on the 15th June, 1868, and the Institution formally launched on its career.

Having thus traced the origin of the Institution, it remains to see what were the objects in the minds of its founders, and how these objects have been carried out. These were dealt with very ably and fully by John Horatio Lloyd in the discussion on the Opening Address of the President on 9th November, 1868. He divided them under three main heads: (*a*) Intellectual advancement, by promoting a higher standard of educational training; (*b*) Social elevation, by raising the status of the profession in the eye of the public; and (*c*) Moral improvement, by fostering the best spirit of professional conduct. It will be noted that the duty of looking after the interests of Members—although an important part of the Institution's work—was not included by him among the principal objects for which it was founded; and I am inclined to think that this readiness to give the first place to ideals likely to benefit the public as well as the profession proved one of the greatest factors in the success which attended the formation of the Institution. The Institution commenced with a membership of about 200, and grew steadily year by year until 1914, when the total of all classes reached 5,387. A most important addition to the membership took place in 1905, when the members of the Irish Land Agents' Association were admitted *en bloc*, becoming the Irish Branch of the Institution.

One of the earliest duties of the first Council was to provide a suitable home for the Institution, and I think that we may congratulate ourselves on the fact that they selected Westminster as its *locus*, and that except for the period during which the present house was in building our address has always remained the same, 12 Great George Street. I am having reproduced with this Paper a drawing of the original house which may, I think, prove of interest to Members. They started modestly, occupying the first floor only, but by 1872 the Institution seemed sufficiently firmly established to warrant, and the attendance at its meetings to require, further accommodation. The superior lease of No. 12 was acquired, and extensions planned to provide a Lecture Hall and Council Room, the Secretary's Room, and other necessary offices, leaving the remainder of the building either to

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be let off in offices or to be used for the housing of the Library, the nucleus of which was then being acquired. This work was completed in 1873, and with the growth of membership it became necessary by degrees to occupy the whole house. In 1887 the leases of the adjoining houses in Little George Street were purchased, and by that means the site of the present building, the early need for which was already apparent, was secured.

In 1895 the first steps were taken towards the erection of our present building. Temporary premises were engaged in the Medical Examination Hall on the Embankment (now the offices of the Institution of Electrical Engineers), where so many of us have passed some anxious, but let us hope not altogether unprofitable, hours; and a number of leading architects were invited to compete for the work of erecting the new building, the design of Mr. Alfred Waterhouse, R.A., being that finally selected.

In 1910-11 a further extension took place, the offices of the Institution staff, which had previously been inconveniently distributed throughout the building, being brought together in their present form by an extension over the mews behind, the Lecture Hall and Council Room being enlarged at the same time.

There is no doubt that the standing and importance of the Institution was raised by the grant of a Royal Charter in 1881, soon after the system of examinations, of which more anon, was set up; and while considering the subject of this address it has been brought home to me that it would be to the benefit of Members were the designation "Chartered Surveyor," the use of which was sanctioned by the by-laws, as amended by the Privy Council in 1901, as an alternative to the letters F.S.I., more generally employed.

In 1888 a new departure, which was to have a marked effect on the future of the Institution, was introduced by the establishment of Provincial Committees. Its object was to strengthen the ties between Members practising in the provinces and the central body; to place upon them a part of the responsibility of administering the Institution's affairs; to enable the opinion of the profession on legislative and other proposals to be speedily and accurately ascertained; and to stimulate that corporate feeling upon which the strength of professional societies must largely depend.

It had been my intention, as President during this Jubilee year, to ask the chairman and secretaries of the Provincial Committees to organise a series of meetings, either jointly or singly, at which Members of the Council and myself might have had an opportunity of meeting Members in all parts of the kingdom and discussing with them both professional and domestic matters. Unfortunately war work, to which Members are devoting so much of their time, reduced staffs, the difficulty of travelling, and other causes, have rendered it inpracticable to carry out this proposal.

I must now turn from these more domestic matters to the subject touched upon in an earlier part of this Address, viz., the objects for which the Institution was founded and the manner in which they have been carried out.

Dealing first with (*a*) Intellectual Advancement, the establishment of the examinations in 1881 must at once spring to the mind of every one, and I am proud to think that although the Surveyors' Institution is not the oldest of the professional societies, it was the first to introduce the examination system as the qualification for membership.

To us who have been brought up with that system as a method of testing the knowledge and qualifications of applicants for membership, the idea may seem the most natural possible; but forty years ago the world was less advanced, and it speaks well for the foresight and breadth of view of those who then guided the Institution barque that they first combated the doubts of those who questioned the possibility of setting up technical examinations of a sufficiently practical nature to be of value, and finally convinced them as to the advantages which would attend such a departure. The standard of examination, which from the first was set at a high level, has been steadily raised as the higher attainments and better opportunities of the candidates permitted this to be done, while the importance of keeping them thoroughly practical in character has never been overlooked. It is satisfactory to note that the efficiency of the examinations has received public recognition on the part of the Civil Service Commissioners, who accept them as qualifying candidates for posts on the permanent establishment of the Valuation Department of the Inland Revenue, and by the Home Office in respect of the issue of certificates as Mining Surveyors under the Coal Mines Act, 1911.

The desire of the Council to raise the intellectual standard of the profession was further indicated in 1905, when they decided to place at the command of those about to adopt it the highest educational facilities which the country could offer. Scholarships were established tenable for three years at any recognised university in the United Kingdom, and in any course approved by the Council as bearing on the training of a surveyor.

I cannot leave the subject of professional education without impressing upon Members the increasing importance which must attach to such qualifications in the future. The duties imposed upon surveyors and land agents become more and more exacting, and call for the highest possible technical training if success is to be attained. This perhaps is not difficult to understand if one considers the wide scope of the surveyor's business; speaking from a knowledge of that branch in which I myself mainly practice, an intimate knowledge of agriculture, forestry, building construction, accounts, local and imperial taxation, drainage, the Agricultural Holdings Act, Acts for the compulsory acquisition of property, and other statutes dealing with landed property, must be looked upon as almost essential; while some knowledge of such subjects as agricultural chemistry, geology and botany, water supply, sanitary science and local government is also necessary.

Nor has the need under the second heading, viz., (*b*) Social Elevation, by raising the status of the profession in the eyes of the public been overlooked.

Even in the earliest days of the Institution it was quickly recognised as a body from which practical and impartial information might be obtained on every subject connected with real estate. Few, if any, Commissions or Departmental Committees investigating such questions have sat during the past fifty years without the assistance of Members being called in either as witnesses or as commissioners. I need not attempt a detailed list; it is enough to mention such diverse inquiries as the various Commissions into the State of Agriculture, the London Water Companies, the Disposal of Sewage, Town Holdings, Local Taxation, Afforestation, and Coast Erosion, not to mention a whole host of minor inquiries ranging from Small Holdings to Building By-laws, and from Sales of Estates to the Public Health Acts.

It was, therefore, perhaps not surprising that the Institution early obtained statutory recognition, the first occasion being under the Metropolis Management and Building Acts Amendment Act, 1878, when it was appointed as one of the two professional bodies empowered to report to the Secretary of State upon any new by-laws framed by the Metropolitan Board of Works. Later came the London Building Act, 1894, under which the duty of nominating a surveyor to sit upon the Tribunal of Appeal was imposed upon the Council; the London County Council (General Powers) Act, 1909, dealing with regulations for the erection of buildings in reinforced concrete; the Finance (1909-10) Act, 1910, under which the President of the Institution was associated with the Lord Chief Justice and the Master of the Rolls to draw up a panel of referees composed of Members of the Institution or other qualified persons to hear appeals under the Act, the Defence of the Realm (Acquisition of Land) Act, 1916, which followed the precedent of the 1910 measure; and

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the Corn Production Act, 1917, in which the President is constituted the authority to nominate arbitrators to hear appeals against orders made by the Board of Agriculture or County Executive Committees under Part IV. of that Act, to mention the more important only.

International Conferences have been held in Paris and Brussels, in which representatives of the Institution took part; and in 1909, at the last Colonial Conference, the Institution, at the request of the Colonial Office, organised an important series of meetings, at which almost all the self-governing colonies were represented to determine whether, and on what terms, reciprocity with regard to the examinations for surveyors might be arrived at between all parts of the Empire, a subject which had been placed upon the agenda for the Colonial Conference by, I believe, the Australian Government. An unanimous and valuable report resulted, and doubtless had not the next Conference been postponed owing to the war, the matter would have been taken further.

The third of the three objects mentioned by Mr. Horatio Lloyd was (*c*) Moral Improvement, which he considered would be obtained by fostering the best spirit of professional conduct.

My remarks as to the manner in which (*a*) and (*b*) have been carried out apply largely to (*c*) also, as successful efforts to raise the educational and social standards of a profession must necessarily exercise a beneficial influence upon the professional conduct of its members. But, apart from this, the influence of the Council through the Professional Practice Committee has been in the direction of inculcating a high ideal of professional honour and conduct among Members; and although in individual cases lapses from this model may occasionally be brought to the notice of the Council, an expression of disapprobation on their part usually suffices to prevent a recurrence of the conduct in respect of which complaint was made and the tendency generally has been definitely upwards.

Thus far I have been referring only to the relations between persons carrying on the same profession, and the unwritten rules which govern their conduct one towards another and which debar the one from attempting in any way to attract clients of one another or to deprive him of emoluments arising from work on which he might naturally expect to be employed.

While the etiquette which must necessarily exist with regard to these matters if the differentiation between a trade and a profession is to be maintained is important, still more important is it that the relationship between the surveyor and the public or his clients should be governed by the highest considerations of probity and honour. As long ago as 1868 John Clutton, in his Opening Address at the first Ordinary General Meeting of the Institution, referred to the danger of surveyors, unconsciously perhaps, becoming partisans or advocates of the interest by which their services have been engaged, and of their being, perhaps unconsciously, led astray by their zeal or imagination under the guise of giving opinions. Mr. Clutton pointed out that the business of a surveyor was to give an unbiassed opinion upon the subject placed before him, and not to become in any sense an advocate. He instanced a well-known surveyor of the time who, on being asked if he were not "concerned" for some one, replied "I am employed by him, but not 'concerned' for him."

It must not be supposed that in giving this warning Mr. Clutton meant to suggest that a surveyor should not look after and provide for every legitimate interest of his client, but that in doing so he should weigh the whole circumstances in a judicial manner and give his advice in a fair and unbiassed way. It must not be forgotten, too, that his words were spoken fifty years ago, and I have no hesitation in saying that the danger to which he referred has been considerably lessened by the higher standard of professional training which now obtains, and of which I have just been speaking.

Such then, shortly, is the record of the work of the Institution during its fifty years of life, and if I desire to pay tribute to the efforts of the Presidents, Members of the Council, and Members who during the first thirty or forty years bore the brunt of an uphill fight, and laid the foundation so firmly and securely, those Past-Presidents who are still with us will understand my meaning, and will not think that I wish in any way to belittle what has been done of more recent years. But there can be no doubt that had not the work of the earlier days been done with thoroughness, foresight and care, those who followed could not have been able to take their part in the more important professional and national work which year by year is imposed upon them, nor would the Institution have attained the position which has justified its opinion being sought. I feel every confidence in assuring public departments, and others who may ask for assistance upon subjects within our purview, that the traditions laid down by our predecessors will be upheld, and any matters brought before us be dealt with on broad, impartial and business-like lines; and that any opinions or advice which may be offered will, to the best of our ability, be based upon a careful consideration of all the interests concerned, and given only after bringing to bear on the question submitted an extensive and unique professional knowledge collected from all parts of the kingdom.

I conclude my address with the subject which is uppermost in all our minds, the manner in which Members have taken their part in the combatant services during this dreadful war. I designate it as "dreadful" because of the great suffering and sorrow it has brought in its train, but when we consider the objects with which we and our Allies entered upon the war, and the glorious deeds of heroism and self-sacrifice which have accompanied it, I am not sure that that term is not out of place. The thought of these may help to temper the sharpness of the sorrow of those who have lost those near and dear to them, while the wonderful attainments of the Allied armies on the Western, Macedonian and Palestine fronts during the last few months lead one to hope that the end cannot be far distant. Indeed, I sincerly hope that before the end of my year of office I may be able to meet you here to celebrate a permanent and effective peace, and that the position may then justify some outward recognition of this the Jubilee year of our Institution.

With regard to members serving, it is impossible to keep in touch with all, or correctly to record the figures at any particular time, but approximately some 2,420 of those connected with the Institution have joined the naval or military forces, the total membership at the commencement of the war being about 5,380, a truly wonderful record. This is entirely outside those who are doing war work of a non-combatant nature, the number of whom cannot be estimated, but must comprise a very large proportion of the remainder.

Unfortunately such a record could not be achieved without a long list of casualties, and I regret to say that the number of those known to have made the great sacrifice now amounts to 247. We all honour their memory and extend our sincere sympathy to their relatives.

Turning to the happier aspect of the case, I am glad to say that the good work done by Members serving is evidenced by the large number of naval and military distinctions which have been earned, and which are known to include one C.B., three C.M.G., one M.V.O., sixteen D.S.O., one D.S.C., four Bars to M.C., one hundred and four M.C., three D.C.M., one M.M., one M.S.M., one Order of St. John of Jerusalem, and the following foreign Orders: three Croix de Guerre, the Chevalier de l'Ordre of Belgium, the Silver Medal of the Crown of Italy, the Silver Cross of the Italian Order of St. Laurence, two Russian Orders of St. Anne and one of St. Stanislaus, the Serbian Order of the White Eagle, and the King of Serbia's Gold Medal.

In addition civil recognition for war services has been gained in at least 38 cases.

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PICTURE EXHIBITIONS.

If the exhibition at the International Society fails a little in the point of internationalism, the visitor to the exhibition will no doubt readily enough appreciate the difficulties which a society of this kind has to encounter at the present time. Conscription is no respecter of persons, and painters have not been excused, nor, except in some strange instances, sought to be excused from playing a part in the common destiny of civilised manhood during the last four years. If, therefore, the present exhibition does not attain the level of many previous exhibitions the reasons are not far to seek. It has, nevertheless, many points of interest, even if they be mainly British. Mr. Strang, as usual, seems to reserve his best work for the society of which he is President, and his method, a method of calvinistic sincerity, didactic, unextenuating, as it is, both in regard to drawing and colour, shows no tendency to compromise in the four masterful examples which he contributes to the exhibition. Three of these are portraits interpreted with almost a fierce sense of rectitude so far as the externalities of the subject are concerned; the fourth is a Madonna entitled "The Great Mother," with the Child on her lap and other children clustering about her knees. This symbol of divine story is certainly one of the most graceful of Mr. Strang's compositions, and in any case a notable picture; but here again, as in many of his portraits, sympathetic insight, of which technical accomplishment, however great, is only the vocabulary seems to be lacking. The exhibition rivals the Royal Academy Exhibition in the number of its portraits, but the selection on the whole would seem to be more idiosyncratic. Mr. McEvoy's method is quite distinct from Mr. Strang's: he is more impressionistic, and his subjects are seen through an atmosphere that plays on the modelling of the features, on the flesh and costume of his subject, with an elusive effect that is not always satisfactory. The portraits of these two artists are, with one exception, the principal features of the first gallery. The exception is Mr. Pryde's large landscape "The Green Pool," rendered in the monochromatic tones of black and pearl grey, in which Mr. Pryde's imagination finds romantic or poetic expression. We know of no better example than this of Mr. Pryde's work, or one in which his feeling for the mystery, both of colour and sentiment, are more successfully realised.

In the same gallery there are two characteristic examples of Mr. Glyn Philpot's work. Mr. Anning Bell's "The Sleeping Musician" is not so characteristic, but it is none the less interesting on that account; and Sir John Lavery has sent a portrait of Lady Lytton in which the features emerge from the flowing lines of a hat and veil. The international element in the exhibition is largely to be found in the Corner Gallery. But even here the manifestations of modern movements in painting, which one rather expects at an exhibition of this kind, are absent. There are impressionists, but so far as we observed no post-impressionists or examples of the eccentricities of even later schools. M. Tijgat in his "La Pose" and "Le Modèle," provides excellent examples of the impressionist school, and there are the prismatic "Rotten Row" of M. Montigny, and other examples of the same school in this gallery. In a brief review of the pictures we are unable to refer to many that deserve notice, but we cannot leave the exhibition without referring to three artists. In a world of pictures the refreshing open air art of Mr. A. J. Munnings seems to bring us close to not only what the artist paints but what he loves. Mr. Munnings contrives to communicate the lyrical delight in his work which he no doubt feels. His bits of countryside, his gipsy caravans, his animals, the colour, form, sunlight and shade playing on landscape or figure, are all expressed with a sort of effortless joy and sincerity. Miss Hodgkin's various studies of children, or a child, although portrayed in another manner, and many of them being scarcely more than sketches, are also delightful after their own fashion, and prompted, we should imagine, by an impulse that is not very different from Mr. Munnings's. The work of these two artists would alone make the exhibition worth a visit. In the same room there is a pleasant group of etchings by Mr. Nelson Dawson.

The exhibition of the Royal Society of Painters in Water Colours in the Pall Mall Gallery, limited strictly, as judging by its membership it seems to be, to British artists, awakens no interest of curiosity as to movements. The British water-colour school is established on an ancient and firm tradition, and so far at any rate as the present exhibition is concerned, it would seem to remain largely unaffected by the Continental schools. That is not to suggest that the exhibition is in any way dull, for there are few pictures on the walls which would not add to the amenities of a living-room. Mr. Sargent, who is a rare bird at exhibitions in later years, gets away perhaps in his vigorous manner from the prevailing convention in "The Sketchers," in which two figures, with easels and umbrellas, are depicted sketching mountain scenery from a mountain side. Mr. Harry Watson's various landscapes also stand out vividly from among their fellows. for a seeing which seems to resolve the scene before him into movement—the action of light and air, of fleeting shadows and vivid colours—rather than a fixed object for contemplation and observation. The decorative landscapes of Mr. Russell Flint are more sedately composed than Mr. Watson's, but his delight in the effects of sunlight is not less keen or less observant. Mr. Clausen's interesting art has never quite resolved itself into a formula: each subject provides him, as it were, with a fresh problem of technical presentation, and demands readjustments of points of view, of understanding and criticism, on the part of the spectator. The exhibition is sprinkled with a large number of his pictures or sketches. Mr. Cayley Robinson departs a little in his "Eclogue" from his usual type of subject, a landscape with a winding river, classic pavilion on its border, with bridges in the distance, and a shepherd and sheep in the foreground, all bathed in tranquil, iridescent light. Mr. Shepperson contributes numerous works, painted in his delicately fanciful manner, sometimes as in "The Archæologists," with a suggestion of broad humour. His "Verge of the Sea" is a particularly pleasant example of his work. "The Dancer," of Mr. Byam Shaw, an admirably modelled nude, an Eastern dancer, serves to express the artist's skill in Oriental design. Architects will be interested in the drawings of Mr. Thomas M. Rooke. There are collections of the water colours of the late Mr. Napier Hemy and Mr. Lionel Smythe. We should also like to refer to the work of Mr. D. Y. Cameron and Mr. Oliver Hall. Mr. Robert W. Allan departs from his harbour seascapes in his two water colours of Oriental life. The contributions of Mr. Murray Smith, Mr. Thorne-Waite, and Mr. Alfred Parsons add interest to an excellent exhibition.

M. Louis Raemaekers is one of the few artists whose popularity may be directly attributed to inspiration derived from the war, whether it is expressed in topical caricatures of the ex-Kaiser or his son, or his chief ministers and advisers, or whether it is direct illustration from the battle ground in France. As a caricaturist M. Raemaeker's art attains a high level: he expresses a great deal by simple means, and he has a deadly gift of satire. He has the gift of producing character and types, and his nationality does not prejudice his observation. His soldiers of all countries seem to be drawn with a perfectly detached understanding of the type, and we could not say, for instance, that his British Tommy was not drawn by a British artist. Much as we admire M. Raemaekers' cartoons and caricatures we are inclined to prefer his direct representations of scenes from the battle grounds in France. They are among the best pictures of the kind that the painters of war scenes have yet given us. The exhibition is being held at the Galleries of the Fine Art Society in Bond Street, and promises to be as popular as the two previous exhibitions of M. Raemaekers' work at the same galleries.

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Monthly Review of Decoration and Furniture.

Two Centuries of Decoration and Furniture in the United Kingdom.

One can imagine no task more congenial than to examine, appraise, and demonstrate the high attainment of this country in the Arts: material in abundance exists in every county, but the glamour of foreign travel has taken our writers upon a far errand, and the artistic riches of their own country remain, in consequence, relatively undiscovered and unknown.

It is true that we have leaned heavily upon foreign initiative, and borrowed alien artists in abundance at all periods, but these influences from abroad have been so modified in the process of assimilation, and the talents of adopted artists have been apparently so disciplined by their environment, that the resultant styles in architecture, decoration, furniture, and the accessory arts display national characteristics of immense interest, and indicate an artistic development which will be sought in vain outside our shores.

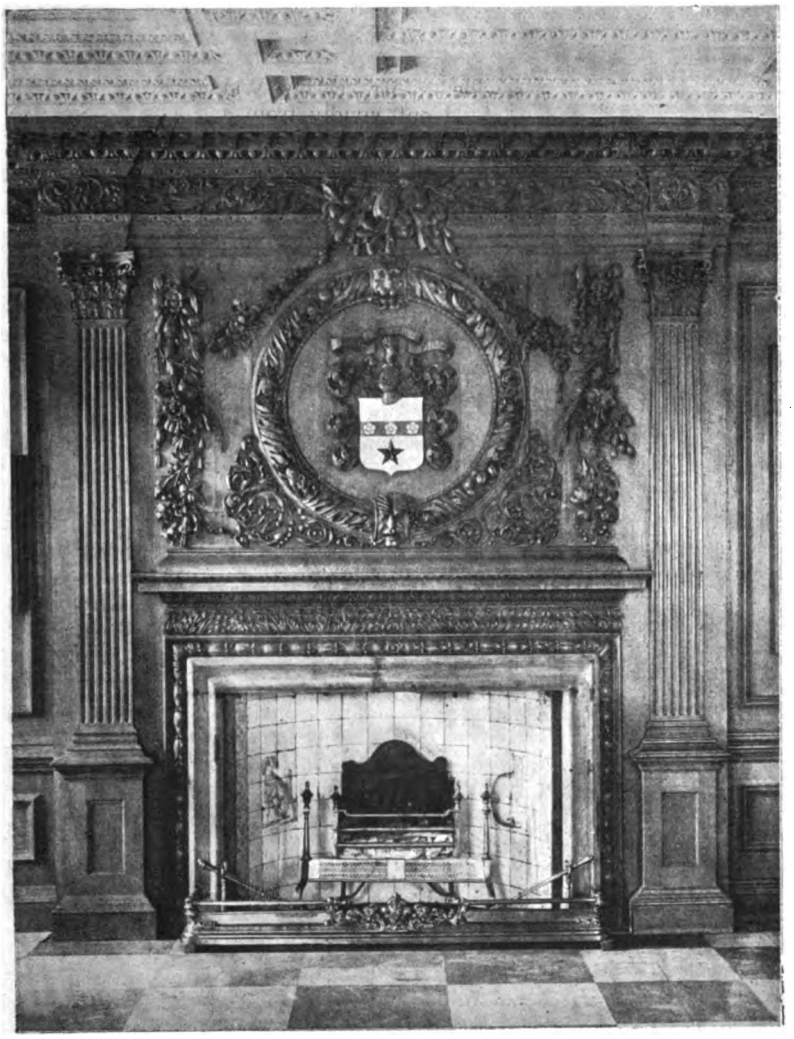


Photo. R. Webster, Edinburgh.

Fig. 1.—CHIMNEY-PIECE, HERIOT'S HOSPITAL, EDINBURGH.

We "adopted Holbein and Van Dyck," wrote Walpole; "borrowed Rubens, and produced Inigo Jones." The list of adopted and "borrowed" artists might have been swelled enormously ere our debt was fully acknowledged—of portrait painters Gheeraedts, Zucchero, Mirevelt, Mytens, Janssen, Honthorst, Lely, Kneller, Wissing, Closterman, Dahl, Rosalba Carriera, Vanderbank—of decorative painters Verrio, Belucci, Berchet, the Riccis, Laguerre, Lanscroon, Clermont, and Angelica Kauffmann. Gibbons, the carver, was a Dutchman by origin, though an Englishman by denisation. The statuaries Le Sueur, Fanelli, Scheemakers, Rysbrach, Roubilliac, Van Nost—the metalworker Tijou—clockmakers like the Fromanteels—tapestry and carpet-weavers such as De May, Vanderbank, Parisot, Passavant—gilders such as Van Opstal and Cousin—silversmiths like Lamèrie, potters like Sprimont. The list of our adopted sons is an exhausting one, for England was handsomely enriched by the Huguenot and other infiltrations of skilled artists and tradesmen, fleeing from persecution or seeking patronage on our ever-hospitable shores. It is satisfactory to notice, in this connection, that our architects and cabinet-makers were more generally Englishmen, though, of the former, Gerbier is known to be an exception, and the name of Gerrit Johnson, cabinet-maker in the reign of William and Mary, arouses a question which may be solved by the labours of future investigators.

It will be the purpose of this series to "pry," like Wren, "into trades and arts," and to draw attention to certain of the many fine examples of interior decoration and furniture executed in the United Kingdom in the seventeenth and eighteenth centuries, and to trace the process of evolution from exemplars of the preceding century, within which the transition from Gothic to Renaissance forms was consummated. The architecture of the period under review has been very thoroughly investigated and handsomely illustrated in monumental folios, and this is especially true of the exteriors of our more important buildings: the mobiliary arts, too, have been profusely illustrated and for long collected with discrimination and avidity, but furniture, after all, is but an ingredient in the charm, and the subject of interior decoration—the appropriate background, and the architect's proper domain—is still practically an uncharted ocean. The architecture of the period we are considering was compounded generally of plain façades and rich interiors—externally, compared with modern work, simplicity itself: a glance at these noble interiors, however, reminds one that the architect has sold his birthright, and nowadays the process is reversed—façades are his chief concern, and, taste being a rare quality, the result, it must be confessed, hovers often on the verge of vulgarity, while the interior design is at times "as heterogeneous a mixture as a salmagundy." Inigo Jones, Webb, Wren, Campbell, Kent, Brettingham, Paine, Chambers, and Adam bequeathed illustrious examples of their abilities in the designing of noble apartments, while the work of their craftsmen remains to witness the prevailing high standard of creative and manipulative excellence. It is unfortunate that the majority of existing room-interiors have necessarily undergone various mutations: apartments well-proportioned and once splendidly adorned have been repainted and divested of their original pictures, textiles, furniture, and ornaments, until it is rare to find the masterpieces of the ancient craftsmen in their appropriate setting, and difficult to reconstruct the complete environment for which a work of art was fashioned.

We have been familiarised with the work of certain periods to the almost complete exclusion of others, equally endowed with artistic interest: what is needed to fill these lacunæ is an adequate presentation—a chronological conspectus—of the ordered succession of styles

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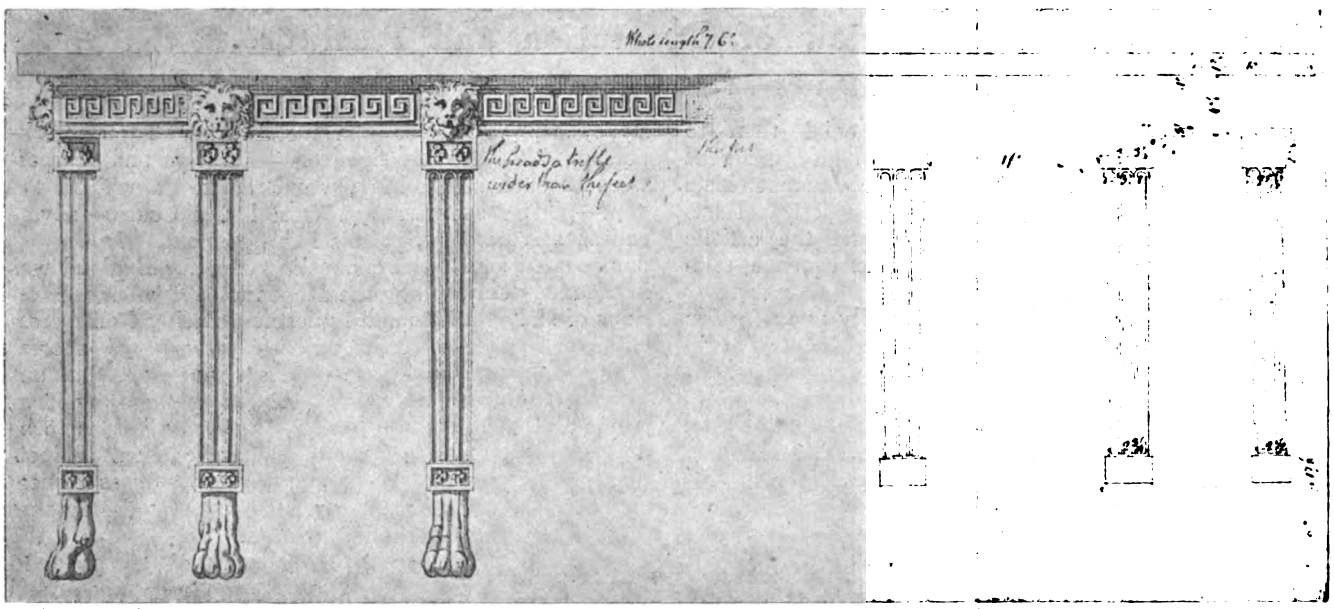


FIG. 4.—DESIGN FOR A TABLE, CARLINGTON HOUSE, WHITEHALL.—SIR WILLIAM CHAMBERS, *inv.*

and periods which comprise the splendid patrimony bequeathed by architects and artists, working in conjunction, at that fortunate period when art in England was at its zenith, and a glorious roll-call of the artists and artificers whose prolific toil enriched this land of ours with those monuments of taste and skill which succeeding generations have been more ready to destroy than to excel.

Not only for the architect and artisan, but for the patron, should a niche be reserved in our Temple of Fame for the cultivated and travelled Englishmen of Tudor and Stuart days, who transplanted new modes from abroad to allure the homekeeping and to stimulate native talent, and who freighted those picturesque and towering East-Indiamen with the spoils of the Orient. Charles I., enlightened patron and distinguished collector; Evelyn, the indefatigable friend of Wren and Gibbons; Pepys—"insatiable gobemouche"—his palate tickled by every rarity; plucky Celia Fiennes, travelling England through to chronicle the adornments of the many stately homes then arising; Burlington, Pembroke, Coke, Walpole—and their satellite architects Kent and Brettingham—crating the movables of Venetia to enrich England—all these polished some contributory facet in the lustre of British art. Those stately houses which arose at their bidding, the estates which they were so solicitous to improve, have been seized upon by land speculators, the buildings razed, the trees felled, the gardens covered with sordid streets, pretentious villas, and mean tenements—their household gods have "made fitful apparition" in the sale-rooms, "inquests" (in the cant term of the "knock-out ring") have been held upon their pier-frames and slab-tables, and their silver has been melted down into current specie. Mouldering behind high hoardings, or rotting in the yards of housebreakers, you shall find vestigia of departed greatness, piteous fragments of the abodes of illustrious men and fair women: from these traces of extinct grandeur, and from survivals more fortunate, we can visualise many mansions, stately and magnificent, with noble staircases, marble pavements, inlaid floors; rooms large, lofty, and justly proportioned; a brilliant *coup d'œil* of salons and state-rooms, doorways enfiladed to produce a vista, windows sashed with crystal glass and pelmetted with cut velvet; piers furnished with superb mirrors flanked by chiselled sconces; rich pendant lustres ablaze with lights; chimneypieces of rare marble richly carved; doors of tawny mahogany with chased lock-furniture; fretted ceilings; walls lined with odoriferous cedar, or hung with figured damask, graced with stucco relievi or glowing canvases in elaborate pierced frames; sideboards and massy tables garnished with silver and cut-glass; cabinets gay with figures and bouquets of Chelsea china; in boudoirs, tea-tables of rare Japan or lustrous satinwood; the library "lined with patristic folios" in choice bindings of velvety calf or old claret morocco, tooled with gold; and without, giant cedars, dark and mysterious, a delectable garden, trim, spacious, and secluded; a terrace walk enclosed within a carven balustrade; radiating alleys, flagged ways, gay parterres, avenues, groves, bosquets peopled with sculptured satyrs, dryads, fauns, nymphs; fountains from which crystal jets rise, poise, and fall; the whole environed by a well-timbered park, a glittering stream, tranquil meadows, and hazy, distant hills. These elements combined to form the whole domain of the cultured man's habitation; such was often the setting of pictures, textiles, china and fine furniture now herded into museums and collections, or comprised in the floating stocks of the sale-rooms or in marts of dealers in antique *objets d'art.*

There remain, nevertheless, many houses throughout England which are representative of the high standard of design, taste, and manipulative excellence attained by their builders—a few still retain their original decorative embellishments, furniture, and pictures, and a still smaller number, their garden environment relatively unspoiled and undisturbed. The vicissitudes of great families are responsible for an annual toll among the examples which remain, and the portents foreshadow changes still more unfavourable to the permanence of many fine collections formed when taste and judgment were instinctive.

It is an unfortunate circumstance that the majority of our authorities, both public and private, concern themselves with the archæological, historical, and literary associations of ancient buildings to the almost complete exclusion of their artistic import—with the early dawnings of an art rather than with its productions in a riper age—with traces of the civilisation of remote periods, and with remains of ecclesiastical rather than of secular art. It is not denied that these undertakings are of vital importance, but it is, nevertheless, greatly to be deplored that these limited aspects should engross the entire energies of those qualified in research—one observes that the history of art begins too often at the Pyramids, and rarely progresses beyond the Middle Ages before retracing its course. In this particular, however, there have been recently one or two enlightened exceptions—the Georgian Society of Dublin, which has performed work of quite exceptional value in a field of remarkable interest, and the Committee for the Survey of the Memorials of Greater London, which has been

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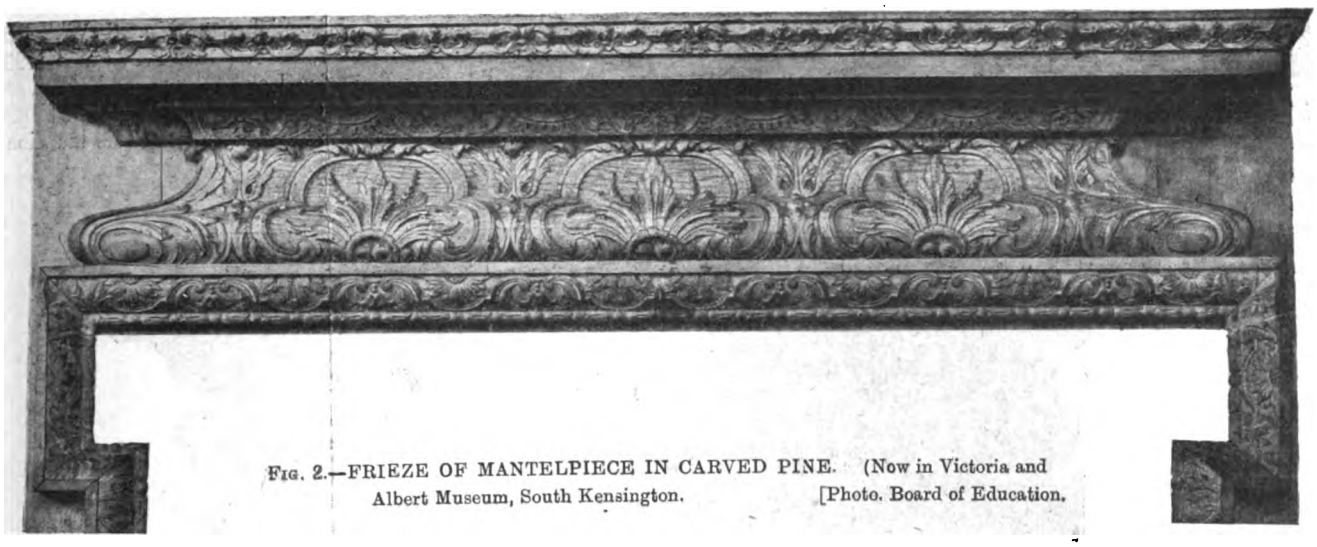


FIG. 2.—FRIEZE OF MANTELPIECE IN CARVED PINE. (Now in Victoria and Albert Museum, South Kensington. [Photo. Board of Education.

fortunate enough to enlist the powerful and liberal assistance of the London County Council. The work of these two societies should speedily be recognised as of the highest utility to the nation.

It is not impossible, but it is increasingly a matter of difficulty, to obtain an unbroken series of examples representative of the wide range embraced by the subject of interior decoration and furniture, and of the works of those architects, artists, and artisans who greatly excelled in promoting the arts and industries connected therewith. It may seem particularly ungracious to assert that both drawings and photographs (and especially the former) accompanying the publications of the two societies referred to in the foregoing—made often under circumstances of the utmost difficulty and disadvantage, and with the very slenderest expectation of recognition or reward—are frequently feebly representative of the superlative excellence of the original examples from which they are taken, but the observation, which is made with reluctance, is directed against a regrettable tendency which has been displayed to regard these records as an adequate substitute for the originals when the lust for demolition is raging.

When one sees the spectacle of Continental dealers innumerable, eagerly contending in the English salerooms for every object representative of the antique art of their own country, which they ship back confident of the ready market abroad for their wares, it is impossible to avoid the reflection that appreciation of our own national treasures is much less rife, and that we destroy without compunction the most priceless possessions identified with architecture and decoration at the first call of a rampant commercialism.

Taste and knowledge in these important matters are certainly less well diffused among us than is the case with neighbouring nations. One factor may be that art is becoming democratised—houses are becoming smaller, although more numerous, and it need be no matter for surprise that the furniture of, for example, William Kent, which is rising to high esteem by the connoisseurs who lead, and commands extravagant prices, looks cumbrous, heavy and operose when divorced from the surrounding magnificence of great classical mansions like Holkham, Houghton, or Ditchley, and even (though of smaller extent) like Marble Hill, or that the capricious fancies of the succeeding Rococo, with its sinuous and unsymmetric forms, which we find carved in the ornate mahogany of Chippendale, assort ill with the fastidious elegance of Chambers and the "frigid genius" of Adam or the "soft sweet colouring of Gainsborough and Cosway." These mutual antipathies—if one may use so strong a word—are not so capricious as would at first appear; style has been well described as the imprint upon tradition of life itself, and the apparently whimsical revolutions in the public taste which are reflected in a collection of decorative objects of various periods will be found upon more careful examination to respond with industrious precision to social and political changes and upheavals, or perhaps to the introduction of new materials following colonial expansion, and some of these influences it will be no idle enterprise to examine, since the knowledge will frequently enable one to assign examples, in the absence of documentary evidence, to definite periods and even to a particular workshop. To pay the reader's understanding so ill a compliment as to deprecate the placing of an Adam chimneypiece in a Tudor room would perhaps be an experiment in forcible comparison fraught with the direst consequences, but it is a common experience to find glaring anachronisms defended as a "judicious mixture"—whatever may be implied by such specious advocacy—when a little more discrimination will make the error clear with all the verity of mathematics.

It is not intended in this preliminary introduction of the subject, or, rather, digression, to do more than present briefly a few illustrations of decorative interior woodwork, the relation of which to our scheme of chronology will be emphasised with more particularity upon a future occasion. Fig. 1 is a chimneypiece in the fine Board-room of Heriot's Hospital, Edinburgh—it is decorated with wood carving somewhat less facile in execution than the handiwork of Gibbons, whose virtuosity may be well studied in the decorations of Hampton Court Palace, executed under the directing ægis of Sir Christopher Wren. An overmantel composition, consisting of a finely executed portrait of Christian IV., King of Denmark, by Van Somer, in a carved oak frame, surrounded by a bordure of richly carved limewood by Grinling Gibbons, in the Second Presence Chamber at Hampton Court (held over this week). Fig. 2 represents the entablature of a mantelpiece now in the Victoria and Albert Museum, South Kensington; it is of carved pine, and, although of considerably later execution, shows the use made by English craftsmen of the ornamental motives appearing in the published pattern-books of Daniel Marot, a Frenchman, domiciled in Holland, to which country he repaired owing to the revocation of the Edict of Nantes. Marot was appointed "Architect of the Apartments" to William III., and exercised no little influence in promoting the Franco-Dutch style prevailing during that and the succeeding reign. Fig. 3 illustrates a noble doorcase in Orleans House at Twickenham, designed by the architect John James, of Greenwich. Fig. 4 illustrates a design for a sideboard table intended for Carrington House.

Fig. 5: a doorcase of carved pinewood from the anteroom of the Secretary's office in the Old War Office, Pall Mall, now demolished. The building was erected in 1760-1767 from designs by Matthew Brettingham, architect (born 1699; died 1769), for Edward Augustus,

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Duke of York, brother of George III. The doorcase is now in the Victoria and Albert Museum.

Plate I.: Doorcase and flank of panelling of carved oak, from a set of chambers formerly at No. 3 Clifford's Inn, Fleet Street; date about 1686-1688, the entire room of which this is a portion being now in the Victoria and Albert Museum.

Plate II.: End of Saloon, Carrington (formerly Gower) House, once distinguished as No. 8 Whitehall. Sir William Chambers, architect (born 1726; died 1796). Date about 1770. Built for Lord Gower, and afterwards the town house of Lord Carrington. Demolished 1886. The new War Office is now on the site of this mansion.

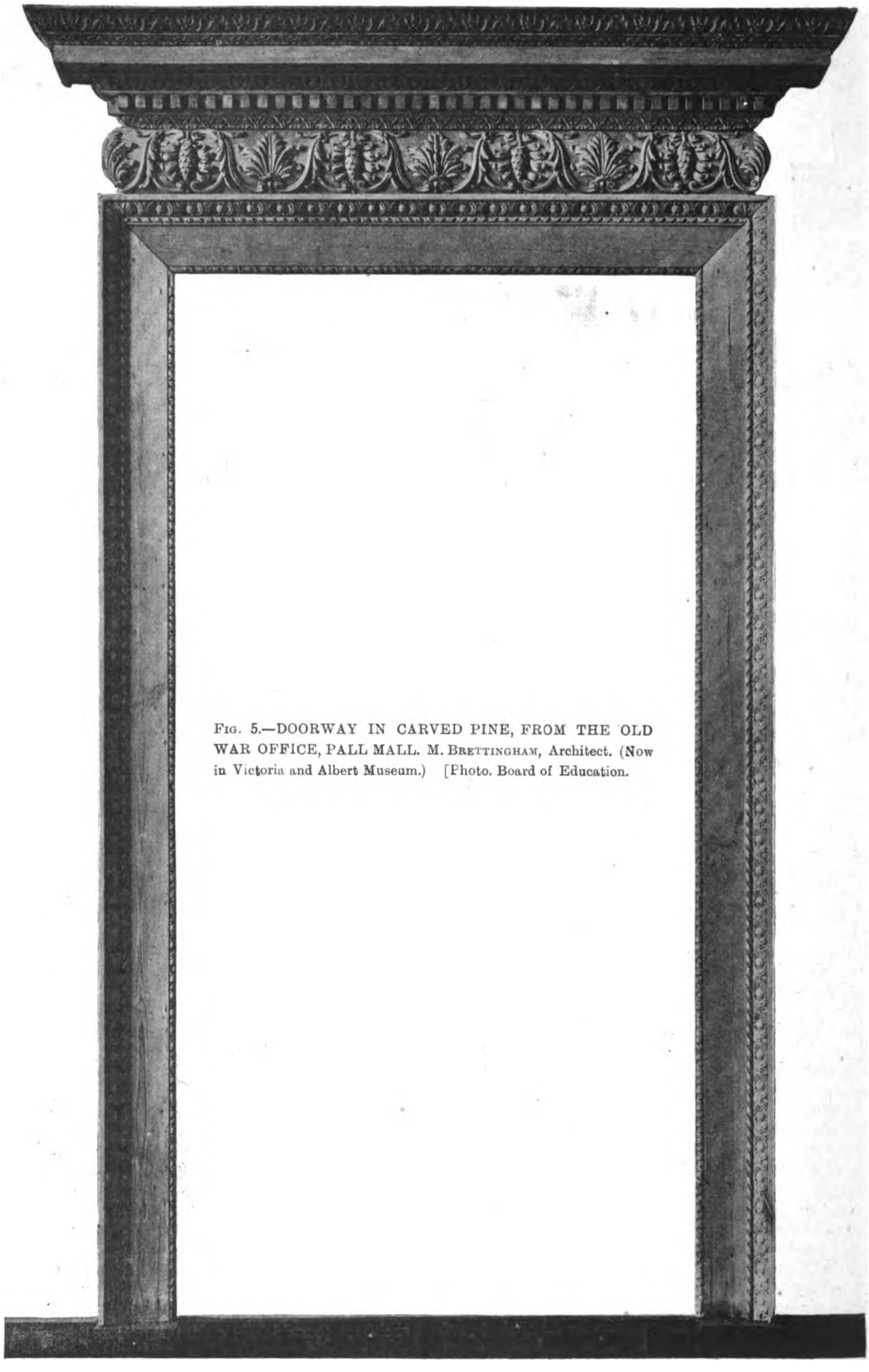


FIG. 5.—DOORWAY IN CARVED PINE, FROM THE OLD WAR OFFICE, PALL MALL. M. BRETTINGHAM, Architect. (Now in Victoria and Albert Museum.) [Photo. Board of Education.

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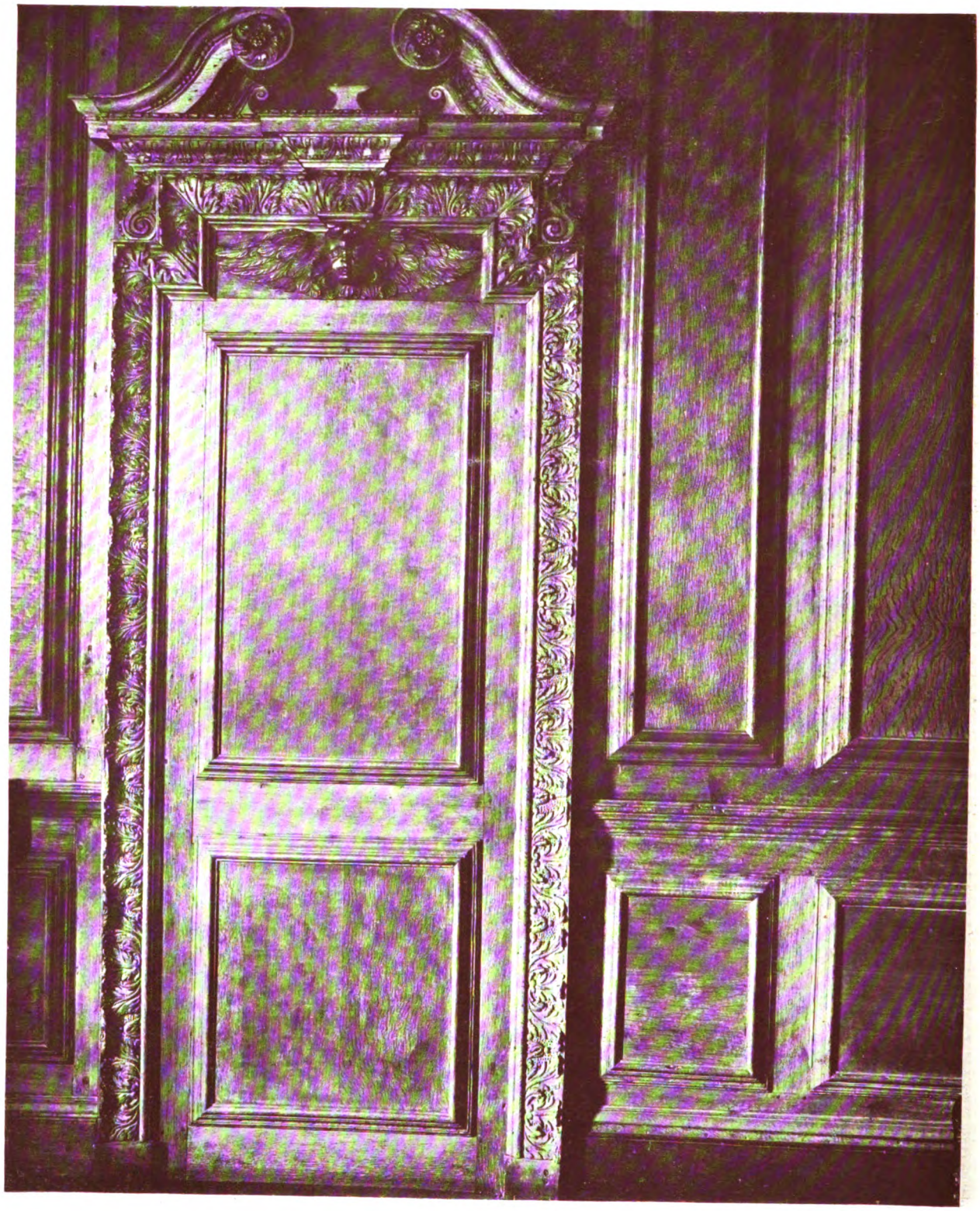


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MONTHLY REVIEW OF DECORATION AND FURNITURE (No. 8)
DOORCASE AND PANELLING OF A ROOM REMOVED FROM CLIFFORD'S INN.
(NOW IN VICTORIA AND ALBERT MUSEUM, SOUTH KENSINGTON)

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HOUSE
J. HATCH

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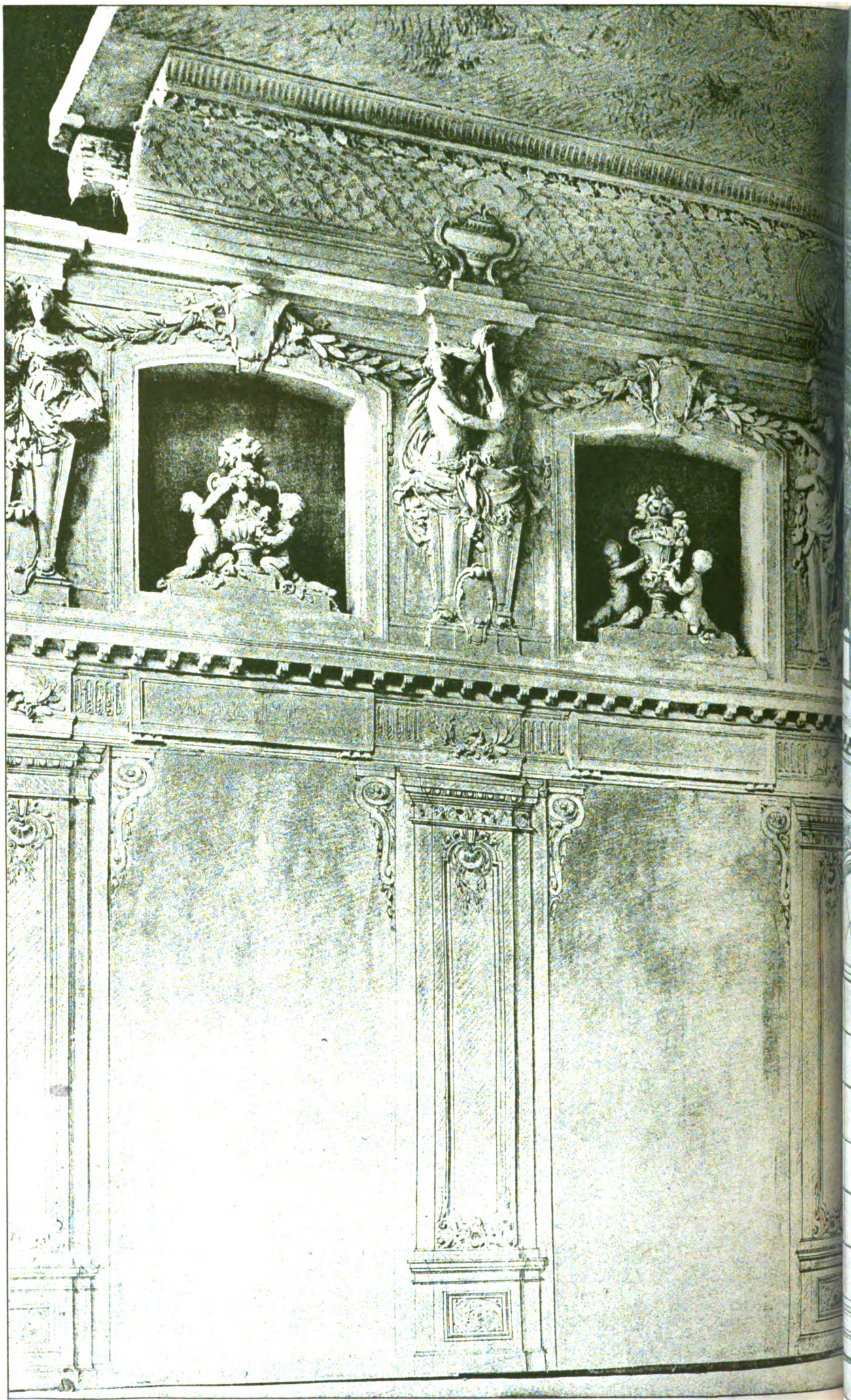
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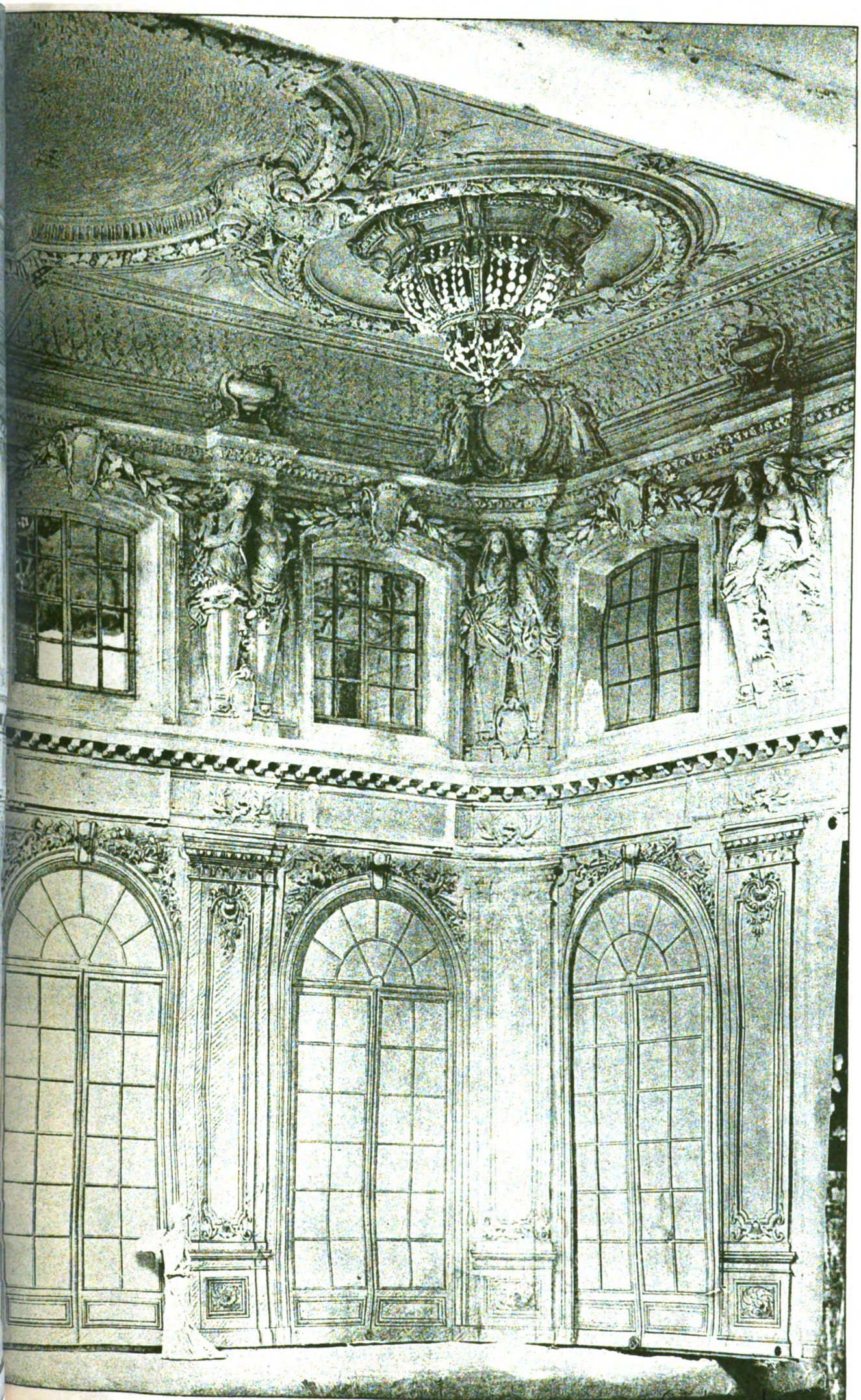
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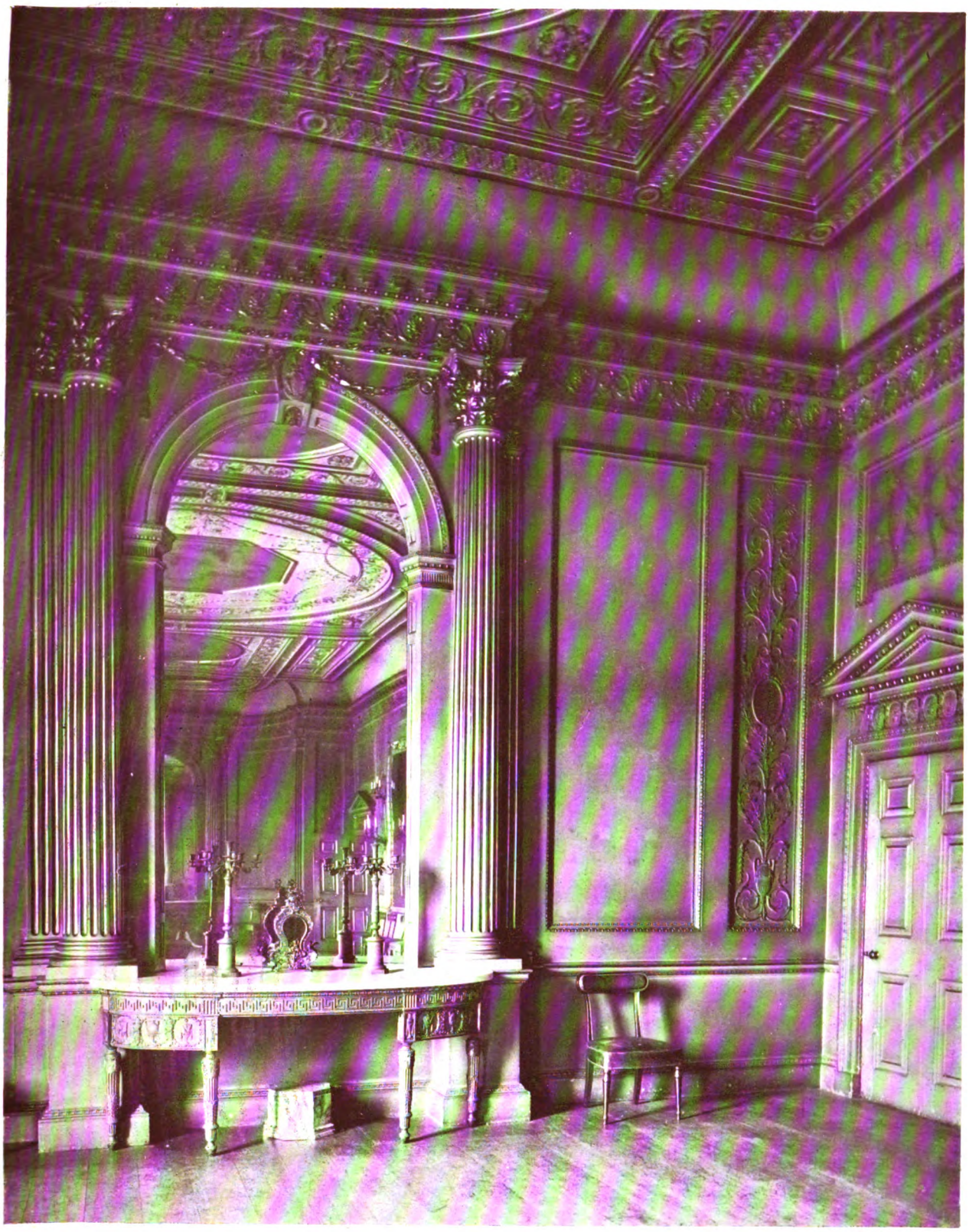


DECORATIVE MODEL.

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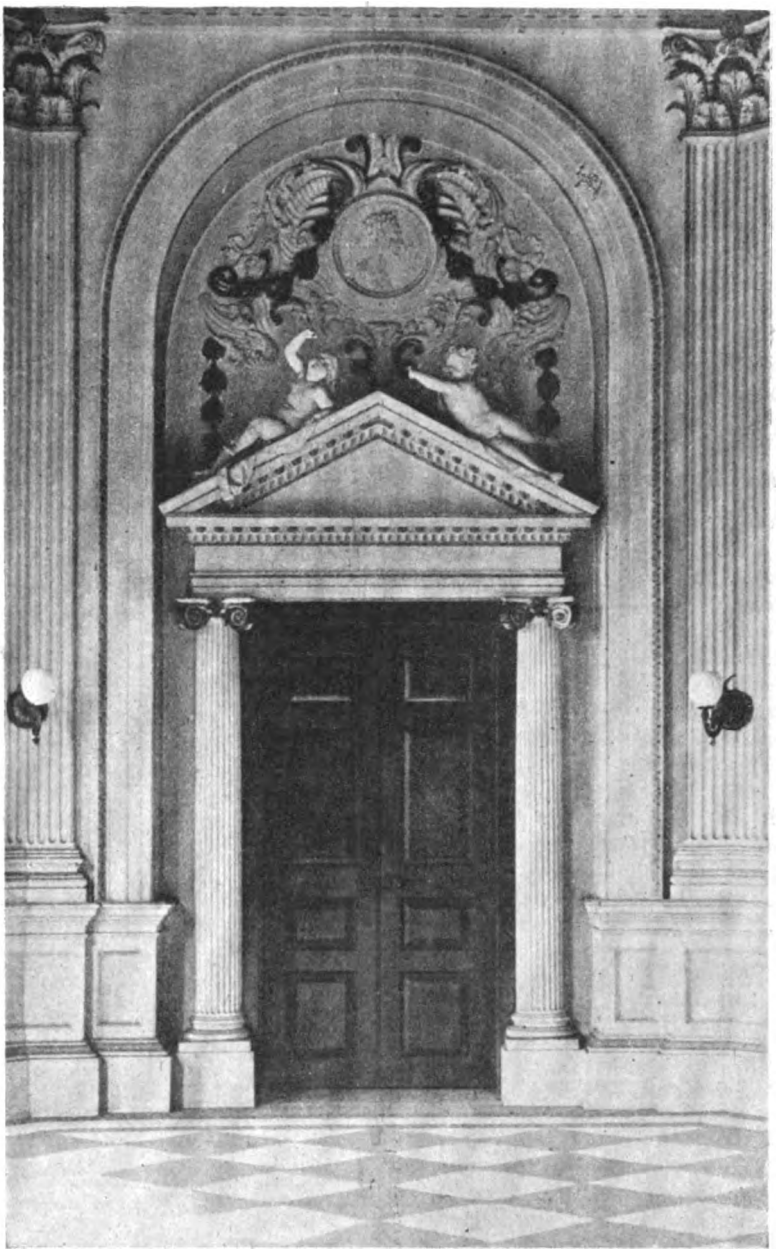
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PHOTO, BEDFORD LEMERE

MONTHLY REVIEW OF DECORATION AND FURNITURE (No. 7)
END OF SALOON, CARRINGTON HOUSE, No. 7, WHITEHALL.
(NOW DEMOLISHED)
SIR WILLIAM CHAMBERS, ARCHITECT.

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[Photo. ARTHUR YOUNG.
FIG. 3.—DOORCASE IN SALOON, ORLEANS HOUSE, TWICKENHAM.

LEAVES FROM AN IMPERIAL DIARY.

A CORRESPONDENT of ours, who has recently returned from Holland, brought with him a most interesting document which had been given to him by a Dutchman who recently visited Germany. The leaves in question had evidently been carried away by the wind from the Palace at Potsdam, and were discovered by chance and carefully preserved. We give a translation:—

"I, Wilhelm, sometime German Emperor and King of Prussia, seeing that not even the old German God has proved an ally worthy of the wielding of the flaming sword of the Hohenzollerns, while my people, ungrateful of the presence of the Lord's anointed, fail to appreciate the privilege of dying for my race, have pondered over my future.

"Had all fallen out as it should have, had my Allies been worthy of me, in truth I should have been the All Highest in Europe, girded with power and begirt with adoration, but yet some things would have escaped my sway, for I had not mastery over the doings of every man, of his purchases and sales. He could, if he listed, build up a fair house or buy himself produce from the lands beyond the seas, and no one could say him nay if he had the wherewithal for his desires.

"And yet I, even the Lord's anointed, see another even in the accursed land which gave my mother birth who hath more power than even I, the ally of the old German God, Wilhelm, German Emperor and King of Prussia. And the man that hath more power than I is even a doctor of medicine, one named Addison. The accursed schwein-pigs of England do bow their heads at his bidding, and he lays down for them what they shall do in the long years of peace, how and what their ships shall carry, what manner those who employ and those who labour shall adjust their differences, and further, what dwellings shall be builded for the people. All this under a word which to the accursed English is sacred, even 'Reconstruction,' though its exact meaning is 'Autocracy,' such as I, German Emperor and King of Prussia, have not even dreamed of. There is but one thing that this doctor whom men call Addison hath not done which I, Wilhelm, would have. It should be necessary for any before thinking to obtain the permit on paper of the autocrat. It would be unthinkable that the world had no great place for me and my race, and it must be that a greater destiny than that of German Emperor, King of Prussia, is to be mine, and that the doctor has shown the way even as a super passes across a stage before the darling of the people appears in the limelight.

"Now will I cunningly disguise myself as an Englishman, and hide the flaming sword of the never-to-be-for-

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gotten grandfather, and will move among the schweinpigs and seek their suffrages. Then will they exalt me and place me in the chair of Addison, that I may be an autocrat such as my never-to-be-forgotten grandfather did not dream of. So will I rule the schweinpigs and through them reach the dominion of the earth, that the autocracy of the Hohenzollerns may be paramount, for the magic word 'Reconstruction' is the doom of the accursed English, and I, Wilhelm, will yet be their master."

CORRESPONDENCE.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

Major Pawley's Empire War Memorial Scheme.

To the Editor of THE ARCHITECT.

SIR,—In the case of a vast architectural scheme produced with dramatic suddenness under the ægis of a distinguished committee, the public has a right to look to the architectural Press for help. In the present case, however, what help are they to get? I have been curious enough to refer to the leading weekly journals, and my experience is worth recording.

(*a*) "The Architects' and Builders' Journal," seeing the necessity (we adopt its own arguments) for finding a site for the new London University, for the improvement of the Embankment, and for the rebuilding of Lambeth Bridge, accepts with enthusiasm the entire scheme, admitting that it is ambitious, but claiming that "this designed city of light and learning" constitutes a noble ideal and presents a beautiful vision, but as it confines itself to appreciation, the public who look for critical guidance may be disappointed.

(*b*) Your own paper sees in the scheme a needless embarkation on a colossal public expenditure which is unjustifiable at such a time and unnecessary in view of at least two great and urgent problems, the rebuilding of Charing Cross Bridge and the extension of the British Museum. You further point out the grotesque effect of the circuses and half circuses scattered up and down the plan (may I add to your objections the sufficiently obvious one that France, Belgium, Italy, and the United States might be more appropriately memorialised than by street curves designed for no other purpose than to introduce their names in and off Empire Avenue?) and the disastrously dwarfing effect which the Memorial Chapel would produce upon the Abbey, and criticise with absolute justice the unsymmetrical front of the proposed University buildings with their nine domes. (And why, oh why, I will add, re-name Vauxhall Bridge Road Columbia Avenue?)

(*c*) "The Builder" speaks of the "strong committee of public men" who bless the scheme, and then proceeds, very rightly, to urge the appointment of a properly elected Committee (has the appearance of the capital 'C' any subtle meaning in this second place?) to consider seriously all suitable proposals and deal with the whole question. There seems to be a certain inconsistency at the outset, and when we go on to the statement that whether the scheme illustrated is bad or good does not concern us now, we can only open our eyes in amazement. Surely, if the "strong committee of public men" are prepared to support a given scheme, the character of that scheme is a matter of importance, apart from the wider question "whether a rebuilding scheme, however ambitious, is a suitable form for the Imperial War Memorial to take." Your contemporary is perfectly right in urging that alternative plans such as Charing Cross Bridge, the improvement of Trafalgar Square, the British Museum, or the Embankment on the south side of the river need the most serious consideration; yet it goes on to argue that "the creation of any number of boulevards, bridges, or squares would be 'feeble' in comparison with the puny figure of Nelson on its ridiculous column, which epitomises the maritime glory of our Empire." If this is true, let us have twin statues of Haig and Beatty at once, and have done with the costlier and "feebler" schemes!

(*d*) "The Building News" lays itself out to report, and not to criticise, but its wholesome caveat against "destroying the irreplaceable things of the old education" has an application to the wholesale rebuilding of a historic area which does not seem to have caught the editorial eye.

It was on this aspect of Major Pawley's grandiose scheme that Mr. Wilfrid Whitten dwelt in "The Observer" for November 3, and I would add to his plea a strong protest against the reckless sowing of modern names over an historic area. Any mushroom township in the Far West can run to a Columbia Avenue, and the devastating effect of the replacing of a great traditional name by a Piazza Vittorio Emmanuele in most of the cities of Italy ought to act as a warning.

In conclusion, Sir, I would ask, What is the public to make of the professional criticism offered it in the pages of four leading architectural journals? Will it be helped by a body of luminous criticism commensurate with the distinguished names on Major Pawley's committee, or will it be bewildered?

I have tried to be strictly fair in my analysis, the rather that I began by seeking critical help myself in judging of a plan so vast and novel. But, Sir, that help was not forthcoming, and I submit that the R.I.B.A. might be worse employed at the present time than in drawing up a memorandum setting forth the merits of the alternative and urgent improvements in the London of to-day which are already before the public, and in discussing each new scheme for the Imperial War Memorial as it is presented, both on its own merits and in relation to the urgency of the accepted improvements already mentioned. Major Pawley, for instance, cannot hope to concentrate the light and learning of London in a University quarter on the Embankment when the British Museum quarter is already planned and begun, the importance of South Kensington spreading daily, the Guildhall Museum, Library, and Picture Gallery fast growing into greater prominence, and the oriental studies of the Empire concentrated in Finsbury Circus.

Do we really want to Haussmannise London, and, if we want to, can we?—Yours, &c.,

RESPICE FINEM.

THE Hull City Council have decided on the purchase of 73 acres of land in Hessle Road at £450 per acre for their housing scheme.

THE trustees of the Wilkinson Sanatorium, Bolton, have approved plans for the new ward block on the men's side, providing for five two-bed wards and one ward for three beds, as well as a large recreation room. Application is to be made to the authorities for consent to proceed immediately with the extension scheme.

PLANS have been prepared for the erection in the neighbourhood of the docks in the Ship Canal district of Manchester of an up-to-date hotel for seamen, providing sleeping accommodation for about 300 men. The British and Foreign Sailors' Society, who have the scheme in hand, estimate that some 30,000 seamen arrive at the docks yearly, so that the scheme for catering for them will necessarily be a large one.

AT a meeting of the Harrow School War Memorial Committee the first report of the Executive Committee was considered. A sum of £40,767 had been subscribed or promised to the fund up to the end of June last, while in addition the School Governors have allocated a site for the proposed memorial equivalent to a grant of not less than £2,500, and scholarships to the value of £14,000 have been founded in connection with the appeal. The Committee propose that the memorial itself should take the form of a cross and, should the funds permit, a memorial hall, which would contain a record of the names and achievements of those who have fallen, and a gallery for portraits of distinguished Harrovians. In addition to this memorial the Committee suggest that one-fifth of the total money subscribed, with a minimum of £10,000, should be devoted to educational purposes for the benefit of the sons or other near relatives of old Harrovians who have been killed or have suffered pecuniarily through the war. It is hoped to raise a total of £100,000.

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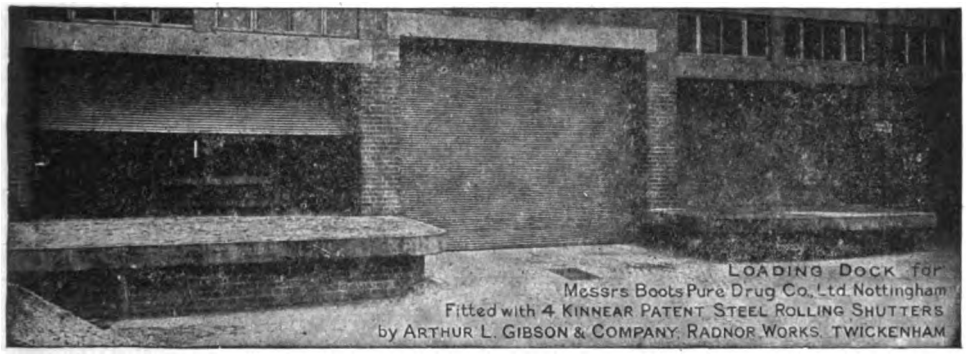
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FUTURE DEVELOPMENTS IN LONDON.

THE memorandum issued by the Garden Cities Association to the local authorities assembled at the Greater London Housing Conference is a document which raises such vast questions for their consideration that it demands the closest and most vigorous investigation. It is a challenge which ought to arouse the interest of everyone who has thought about the subject, and it should settle once for all the proper limits and importance which should be attached to the name and purpose of "Garden Cities." The existence of slums and confused planning in our old cities, together with the recent deplorable discoveries as to the state of our national health, have produced a reaction in favour of better housing conditions and greater facilities for ventilation and open air life.

It is very doubtful, however, whether the low average of bodily sanity is all due to housing conditions, and it is by no means certain that better houses would entirely alter general health. Such a contention leaves out of account the habits of the people. Most social students know that overwork, exposure, insufficient or unsuitable food, excesses in diet or in alcohol, the absence of baths and hot water from so many of the old houses, together with want of exercise, are all responsible for a very large part of the disease and debility of the population. That being so, it is too much to hope that the mere transfer of large bodies of people into undeveloped and comparatively dull surroundings is going to completely alter their habits and character. There are no people who look so ill as many country people do, which proves that location is not everything.

The Garden Cities Association has served a good purpose in promoting wide roads and spacious planning for their houses, but we all know now that such a policy is the only possible one for the future. It is simply the application of common sense to ordinary building development, and when the Association comes to deal with London and tries to apply the same scale of ideas, it fails to carry conviction. It is suggested that "the greater part of the undeveloped land within a ten mile radius, and in some cases even beyond, should be expressly preserved from building development, all new building being in the outer ring." Also that the time has come for the development of the "full garden city principle" to the development of outer London. This principle, we are told is that of civic unity; it imposes a restriction upon town growth, and involves a zone of open land around each city of distinctively rural and agricultural character. It also demands that the whole of the land, including the urban area and the rural zone, should be owned and administered in the interest of the local community.

Now apart from the colossal financial problems raised by the proposed sterilisation of all vacant land within ten miles radius there are many other considerations. The first is that within the next few decades there are likely to be some drastic changes in London. The present complicated transport arrangements will no doubt be unified and worked under one control, with the result that many of the old suburban lines will be abolished, and several new ones made, giving access to areas which, while possessing great natural advantages of elevation, soil, and beauty, are at present inaccessible, such as Totteridge, Shirley, Kingsbury, &c.

Unless the cost of these vast railway and road constructions can be met by recoupment from the development of such areas, the difficulties of their attainment may be insuperable. Also provided they are developed in such a manner as not to rob these places of their rural character it is difficult to see why they should not be inhabited. The areas cannot all be dedicated to the public, and might therefore conceivably soon become market gardens.

The second possibility is that of electric power mains direct from Kent to the factories. The location of a very large number built during the war is already fixed, and these, when adapted to their new purposes, will go far to satisfy future needs for some time, and any further ones would necessarily be built within the cheap power zone in which the existing factories occur.

The third is a natural sequence of the second—namely, the substitution of district heating from public steam mains served by the cheap power available for open fires. Such a change would go far to improve the health and cleanliness of London streets and houses, and would also put constant hot-water services within reach of all.

All this points to inside reconstruction rather than outside extension, and it seems quite possible that provided proper precautions are taken to ensure sound types of houses with ample air spaces and abundant playgrounds and gymnasia everywhere, the result might be better than if existing London should be left to itself in despairing disorder.

Surely the right course is to remodel Old London by insistence upon wider streets, a proper proportion of open spaces to every district, and a bold clearance of slums. There would be no reason then why Londoners should not be as healthy as any other people, if not more so, because of the effect of the mental stimulus afforded by the wonderful opportunities for development vouchsafed to those who are fortunate enough to live in London.

It is significant that the Londoners have, according to our generals, made the best soldiers, and it shows that physical fitness without nervous force is of little value where energy and initiative are wanted. London, by its intense life and activity, galvanises bucolics into highly intelligent and active beings able to stand strain without collapse. The process under bad conditions produces neurotics, but under good conditions an unique type which is a gain to civilisation.

Again it must be remembered that proximity to London has given the boroughs on its borders advantages which they would not have enjoyed had they been isolated and self-contained, such as trams, markets, education, police, gas, water, electricity.

The proposal as to municipal ownership of the land is, of course, purely socialistic, and could not be justified on any grounds, not even on those of economy. We know of certain bodies to-day possessing vacant sites upon which the expenditure over a long period for loan interest, undeveloped land duty, &c., has been so great that their possession has become a burden. Gains would be made in some places, but heavy losses in others, and the net result, considering the cost of administration, would almost inevitably be a public loss. Then again, leasehold tenure of the property would not, in country places, satisfy the tenants, most of whom would insist upon a freehold. If, as an alternative, they were offered 999 year leases the increment almost disappears, and the only advantage left to the public is that of control.

That, however, can be quite as well secured by extension of the principle of the Town Planning Act, and by the acquisition only of those areas through which roads are to be made or open spaces secured. The whole argument emphasises the need for a plan, and no doubt a Town Planning Commission would be the best authority to prepare such a plan if aided by the Local Authorities, but such a body should have complete power over traffic also.

The principle of negotiation instead of purchase by Act of Parliament has never been given a fair trial, and the sooner it is the better. The opinion of those qualified to judge is strongly in favour of this method, and certainly the cost to the community would be very considerably less than by the other method.

HENRY J. LEANING.

AT the last meeting of the Cardiff Town Council it was reported that the Property Committee had purchased eight cottages in Cycle Street adjoining the Roath Market and railway at a cost of £1,500, with the object of making extensions possible to the Roath Market when the need arose. The Tredegar Estate had agreed to sell the freehold to the Corporation at a reasonable price. The minute was adopted.

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THE ARCHITECT
AND CONTRACT REPORTER

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The Advantages of Amalgamation.

MOST of the architects' difficulties arise from the fact that architects are not as an organised body sufficiently in touch with the commercial world in which they live, while men of other professions are, and the amount of work they will as a body obtain in the future will be largely governed by their success or failure in adjusting themselves to modern conditions.

There are many directions in which they should work with, instead of apart from, men of other callings. So-called professional etiquette should be simplified so that its prohibitions simply forbid what is obviously dishonest and unfair, and every man should be left free to exercise his calling under conditions which appeal to his temperament.

The great bulk of domestic architecture is at present carried out by speculative builders, because the average man prefers to buy what he can see rather than what is shown to him on paper. Knowing nothing about the technicalities of building he very humanly reduces the element of chance to its smallest proportions. And yet, if a district is to be developed by building, a good architect should be better able to provide what the public wants than any builder. We believe there are very wide opportunities open to those architects who are willing to build and sell on their own account, and also room for working combinations between builders and architects for the same purpose. The architect who made such an arrangement would be freed from the difficulties he sometimes has to contend with in the case of the individual client, for he would be dealing with an average demand, and his work would be taken or left as it stood at completion.

Taking another combination, that of architects and surveyors, we know from experience that many men obtain opportunities of carrying out buildings because they are recognised by the business community as having experience in the practical questions which so closely surround and influence building. Once called in to advise on such questions, the surveyor usually can either act as architect for any building which results or decide the choice of an architect, and yet a very large number of our profession will state with pride that they do not undertake surveying work, thereby limiting their own chances of employment. The title of surveyor is an honourable and an old one : it conveys a definite meaning that the public is quick to appreciate, and many surveyors make lucrative incomes while the average architect lives from hand to mouth, trying to obtain a public recognition which is grudgingly bestowed or altogether withheld from him.

There is also plenty of room in the world of modern building for the combination of architects and structural engineers in one and the same person. Most of the great American architectural firms include structural engineers in their ranks, and the modern business building always makes calls on the expert structural engineer. There are two ways in which this call may be met—by the architect having sufficient engineering knowledge to deal with such problems himself, or by a working combination which gives him the same power and at the same time enables him to devote himself to that branch of the work to which his inclinations incline.

The combination of architect with architect is frequently fundamentally wrong and productive of friction, for no two men have quite the same æsthetic tastes, and such combinations are for this reason frequently short-lived. The combination of architects and structural engineers would result in enlarging the architect's field, while the intercourse involved would broaden the outlook of both architect and engineer, and would result in the production of better buildings. If we rely, as many of us do, on outside help in these matters, we can seldom be certain that there is a community of interest or aim, and if there is not the quality and character of the work must suffer.

Then there is yet another combination which might appeal to many men of æsthetic tastes—that of an architect and a decorative firm. These firms, like the speculative contractor, are willing to undertake the complete direction and completion of what is really an integral branch of architectural work, which frequently suffers in quality from being divorced from the direction of architects who understand the fuller meaning of decoration.

Our point is that we are too apt to overlook the natural inclination of the public to prefer to buy and pay for the completed work, and to employ those who have the business knowledge and organisation which alone enables them to complete it. We urge that our professional societies should encourage and not discourage all those men who find they can do better for themselves by making a more commercial use of chances which are open to them. The only real essential is that such work should be done honestly and well by men who are both trained and organised, and that no man should abuse a position of trust. We should like to see the Royal Institute open its doors to all who had knowledge and skill in architecture and the allied arts and sciences, however they chose to put such knowledge and skill to account, and, as a correspondent urged in a letter to us last week, we should like to see the leading body in the profession expressing a definite and corrective opinion on all great questions of public improvements and schemes for building. We should, in a word, like to hear its views before and not after other bodies less capable of giving authoritative opinions had criticised such schemes.

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Illustrations.

HOUSE FOR M. GUITRY.—The Late C. Mewès, Architect.

Notes and Comments.

Our Illustrations.

Our illustrations this week are of a house designed by the late M. Mewès, who, in partnership with Mr. Davis, carried out the "Morning Post" offices and the Automobile Club. Unfortunately for architecture M. Mewès died in the early days of the war, for he was one of the most refined and virile of French designers. The house we illustrate was built on a peculiar site in the heart of Paris for the great actor, M. Guitry, whose requirements were somewhat unusual. He wanted a great room in which he could rehearse his acts, and objected to having servants' rooms arranged over his own accommodation. This and the nature of the site dictated the arrangement. We have always regarded this as a masterpiece of that branch of design in which the French excel all others—the classical and scholarly arrangement of a town house. The average Englishman would want other and different arrangements, but of its kind and type we believe this represents the perfection of refinement and beauty as applied to architectural design. The arrangement and disposition of the plans is most ingenious and carefully thought out and reminds us of the models of symmetrical disposition produced in the epoch of Louis XVI., which was in many ways the culminating epoch of the French Renaissance and has had so great an effect on modern architecture throughout Europe.

Professional Papers.

The papers delivered before professional societies are usually long and are also fully reported in the Journals of the various societies, while under present conditions of the supply of paper our available space is very much limited. We therefore propose to give a brief account of meetings instead of attempting to abstract the papers delivered. If a paper is good it is difficult or impossible to give abstracts which do not omit something which is important; if, as is happily less frequently the case, a paper is a poor one, it is not worth abstracting. Again, if a conversation is repeated it often conveys a less vivid impression of what actually took place than a few sentences conveying the hearer's impressions. The one method enables us to emphasise what seem to be salient points; in the other we may, through limitation of space, omit points which the author of a paper may lay especial stress upon. The ideal abstract is one prepared by the author of a paper, but unfortunately we seldom obtain such assistance. But we should probably be right in saying that printed and written matter could be reduced to about one-half its present volume if more skill were displayed in eliminating what is unessential and irrelevant.

The Increased Supply of Materials.

A Committee of the Ministry of Reconstruction consider that the following steps should be taken to increase the supply of materials for after war building. The Committee have satisfied themselves that for some time sufficient material will not be available to meet the demand. The general lines on which they think that the increase in production of material can best be advanced are summarised as follows: Priority of release upon demobilisation for the professions and trades concerned in the building industry. Release at the earliest possible date, well in advance of the commencement of demobilisation, of pivotal men required for the production of materials. Immediate provision of labour to get and prepare earth during the ensuing winter for the making of stock bricks, so as not to miss manufacture in 1919. Immediate facilities for repairs, renewals, and restoration of works. The release from Government occupation, at the earliest possible moment, of brickyards and premises now occupied for storage, &c., in order to allow of preparation and equipment for early resumption of brick-making operations. The securing of adequate supplies of fuel and raw materials. The scrapping of inefficient plant and the introduction of more modern appliances and increased use of machinery. The use of local materials wherever possible, to secure economy in transport. Institution of scientific and industrial research in the respective trades, and the practical application of the results. Possibly, in certain circumstances, financial assistance by the State in extensions and equipment of works. Closer co-operation between employers and employees through every means available, such as the operations of the Joint Industrial Committees. The establishment of confidence in the various trades by the knowledge of a sufficiency of work for some time in advance. This could be secured by such means as the early placing of contracts wherever possible for post-war delivery of materials such as bricks, stone, &c. Standardisation of fittings in all trades, especially for cottages, so that manufacture might proceed without delay. Immediate steps to be taken by H.M. Government for importation of at least 100,000 standards a month of soft wood for all purposes during the first year after the war. We hope that whatever is decided upon we shall hear of the early abolition of the system of permits for building.

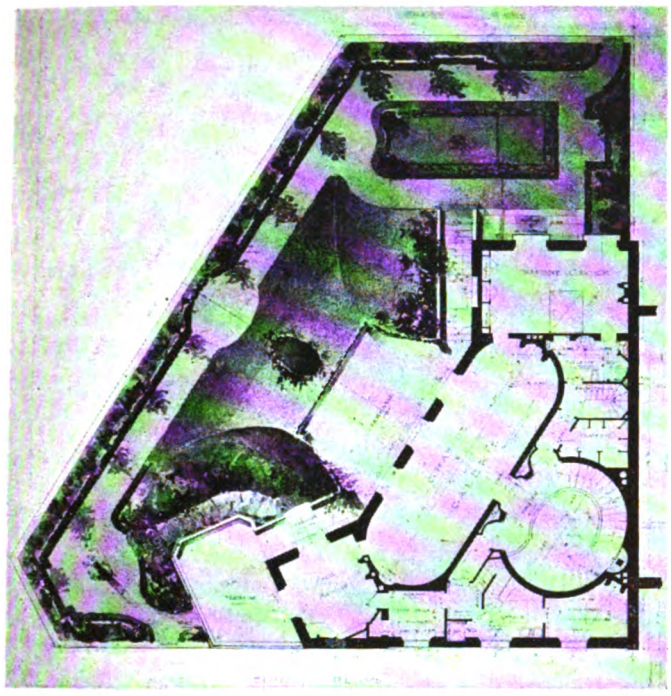
Housing in Scotland.

The circulars sent out by the Local Government Board of Scotland have resulted in showing that there is a shortage amounting to 108,902 houses, which is made up as follows: In the seven large burghs, 66,552; in burghs between 15,000 and 50,000 population, 10,750; in smaller burghs, 1,142; in industrial and mining areas, 9,020; in agricultural districts, 6,226; among the crofters, 880; and in the Outer Hebrides, 4,132. The preparation of schemes for 9,000 houses compares very well with similar provision in England. Glasgow 6,731, Edinburgh 744, Dundee 1,060, Peterhead 50, Haddington (western district) 200, Rutherglen 100, Maxwelltown 100, Hamilton 250, Wishaw 200, Gourock 600, Hawick 100, Lochgelly about 50, and Perth district 18, amounting to a total of 9,663 in all. We trust that some consideration will be given when supplying these wants in common with those of England and Ireland to changes in construction and arrangement, which are bound to be effected in the near future, and which are hardly realised by those who are in haste to push on with the provision of housing.

The Garden Cities and Town Planning Association.

We gave in a previous issue some passages from a memorandum published by the Garden Cities and Town Planning Association dealing with the provision of housing, traffic facilities, and other amenities for the Metropolitan area. As is customary with reformers, they wish to bring about a wide extension of Socialistic control, but we are glad to note that they suggest that the County Council should obtain the statistics on which they think that a claim might be based. We are glad because the County Council has now had years of experience in dealing with intricate and difficult problems, and knows the responsibilities entailed, and we should not be greatly surprised if its data when obtained proved a shock for the ardent spirits who suggest its intervention. The result might well be similar to that of the Commission appointed in 1884 to inquire into the City Companies, which went out like a lion and returned with the chastened spirit of a lamb. We very much doubt if many people know how great the powers which may be exercised under the Housing and Town Planning Act are, and we believe that it would be well if they considered what they can do under that Act before reaching out for extended powers and new measures. We were doubtless too individualistic in our attitude during many years of the nineteenth century, but there is much danger now that we may rush to the opposite extreme of devoting attention to any business except that of our own.

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M. GUITRY'S HOUSE.—PRINCIPAL FLOOR

THE R.I.B.A. MEETING, MONDAY, NOV. 18.

After a few introductory remarks from the President on the great events which have led up to the termination of the war and the losses which the Institute has suffered among its members, Mr. William Dunn read a paper on the housing scheme which his firm has carried out at Chepstow. Working drawings of the scheme were hung up round the room, but did not afford a sufficiently good illustration of its many excellent points. The only adequate way to illustrate a paper is by lantern slides, or, failing this, by diagrams specially prepared for the purpose. Working drawings require close inspection, and when used to illustrate a paper fail in their purpose unless shown by means of slides. We also regret that the architects are unwilling to allow publication of their drawings at this stage, as it leaves us without any means of giving our readers a clear idea of the nature of the scheme and of its points.

The site is 28 acres in area, and lies outside the Port Wall, forming a little valley bounded on the northern side by the Port Wall on the crest of the hill, and on the southern side by the wooded heights of Hardwick Hall. At the top end of the valley there are the houses outside the town wall; at the outlet of the valley lies the river, severed from the site by the railway crossing the river at a height above it, and by the Town Meads now forming the shipbuilding yard. Down the centre of this valley there is an old road extending half-way down, and below it a footpath leading to an archway under the railway. There is a fall of 88 feet in a length of 1,300, measured along the slope of the valley. The entrance to the estate is from the top, and the railway arch at the bottom was to be the entrance to the works of the Standard Shipbuilding Co., in which the greater part of the inhabitants were to be employed. The central avenue, which was named Hardwick Avenue, and followed the line of the valley, is 36 feet wide, the side roads which follow the contour lines being placed 155 feet to 190 feet apart to allow space for two houses and their gardens. Only by following the contours could reasonable gradients be obtained. The blocks of houses have long frontages and narrow depths.

Three open spaces were proposed, one in the centre of the site to serve as a village green, one at the top end where the site is fairly level, and the largest at the bottom end to serve as a recreation ground. The scheme proposes about ten houses to an acre, and back lanes with blind ends are provided to give access to back doors.

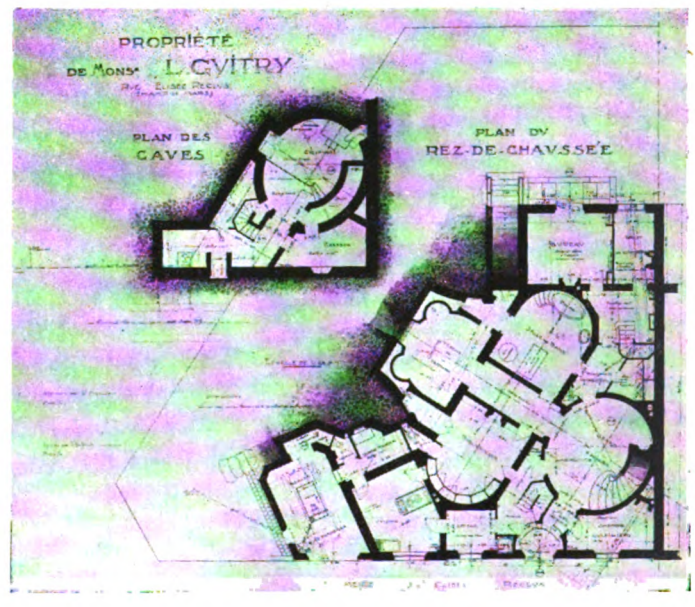
The front doors of the cottages open into small porches, and in the larger houses to staircase halls, and round the back porches are arranged the doorways to scullery, fuel store, and w.c.'s. Every house has a bath, but in a few cases the baths are placed in sculleries, the hot water being taken for economy from the copper close at hand. In a few of the better houses the bath rooms are placed upstairs. The coppers are independent, without brick setting, and the kitchen ranges of the Yorkshire range type, with open-and-close fires. The heights are made 8 feet in the clear. The external walls are built of two thicknesses of concrete formed of four inch blocks made in the Winget block-making machines. In the first cottages built the blocks were 32 inches long, 9 inches high and 4 inches on bed, but as the workmen objected to handling such heavy blocks in the later work the length was cut down to 16 inches at some sacrifice of effect.

The only brick available when the work was started was that used in the Midlands, the appearance of which was not liked, but the concrete construction adopted has been as cheap as the cheapest brick available. The blocks were made on the site with local stone chippings and sand, and the usual cold grey appearance of concrete was avoided by the use of a dry mixture of concrete which has not this defect. The face mould had groovings on it, giving what is called in masonry a droved face to the executed work. The partition walls were formed of similar blocks without the droved face, 4 inches thick for bearing partitions and 2½ inches for others, and no plastering was required for sculleries and offices. The roofs are covered with sand faced tiles varied in colour; the valleys of roofs are all formed of swept valley tiles, and the ridges of plain roll tiles similar to those of old cottages.

Floors and roofs were designed to be of ordinary timber construction, and the first 31 houses were so built. It was necessary in the later cottages to form the floors of hollow bricks built on centring. The ground floors throughout are of cement, and all living rooms, parlours and bedrooms are furnished with Wiffley flooring. The streets and sewers were begun in 1916. The first 15 houses cost £450, exclusive of outside costs for sewerage, garden formation, or fences; the second 15 cost £530 each; the cost of the remainder cannot yet be determined, owing to a number of varying factors. The houses are lighted by gas.

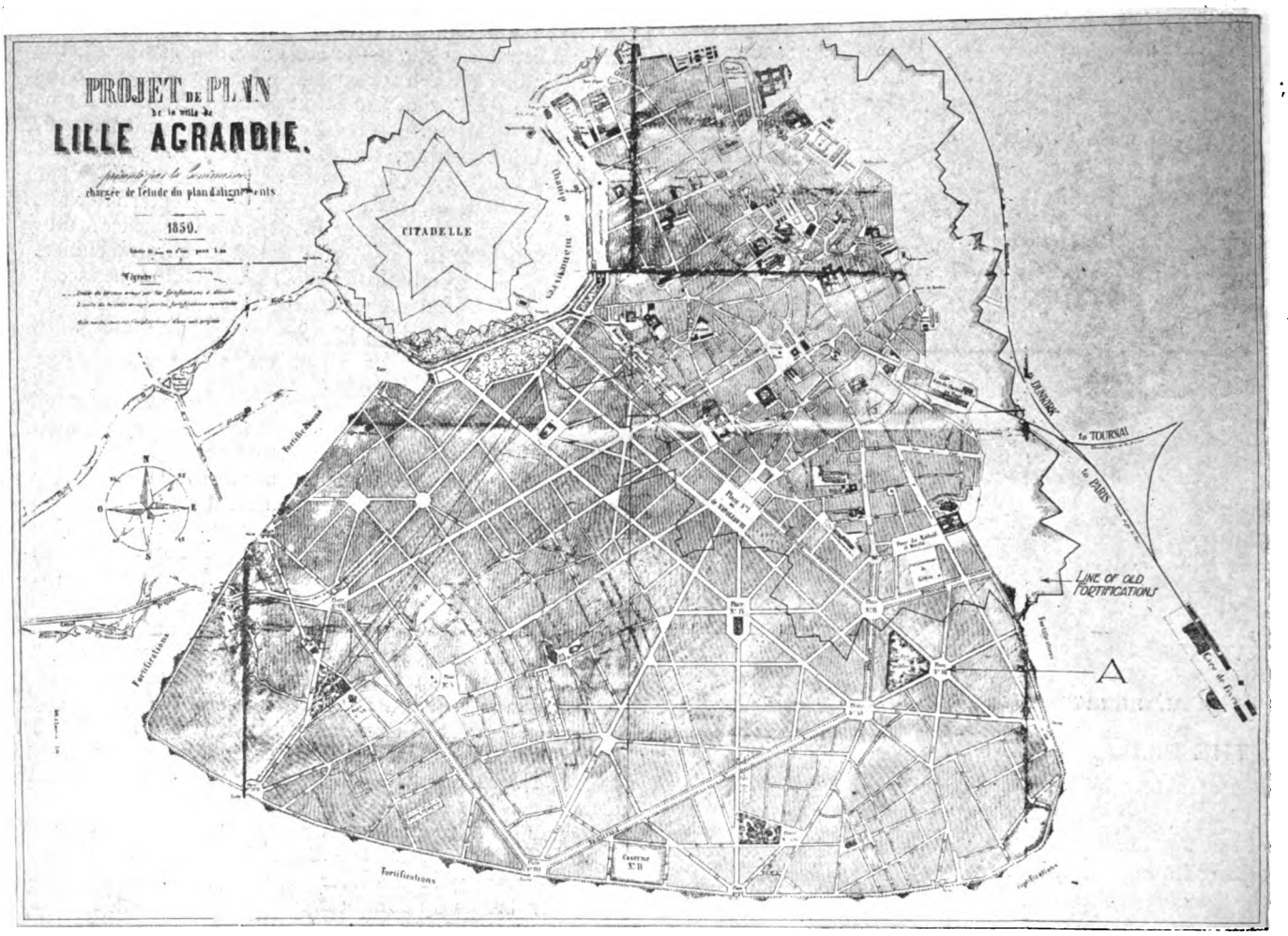
The smallest house has a living room or kitchen of about 168 square feet in area, three bedrooms, a scullery with bath, fuel store, w.c., and larder. The largest designed so far has a dining-room, 4 bedrooms, bath with hot and cold water, scullery and offices.

A vote of thanks to Mr. W. Dunn for his paper was proposed by Mr. Raymond Unwin, seconded by Professor Adshead, and carried unanimously, and Mr. A. J. Pitcher and Mr. Herbert Baker spoke before the termination of the meeting.



M. GUITRY'S HOUSE.—LOWER FLOORS

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LILLE.

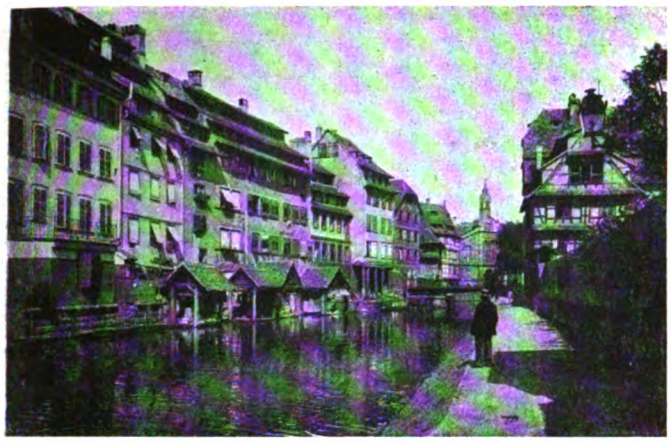
LILLE was turned into a modern town about 1860, when a scheme for enlargement and the incorporation of several outlying suburbs was submitted to a Committee of Extension. The plan follows closely the model of Haussmann's work at Paris, and is the best example in France of those methods applied to a commercial city. At first, no doubt, the visitor was disappointed on seeing so much of the trappings of the Parisian effect and missing the inimitable Parisian charm and its noble buildings. The vistas, for example, do not terminate monumentally, and the central Place de la Republique has rather an empty and bare effect. But after this initial disappointment, and as a result of a mental comparison of English manufacturing towns, one gradually realises the great achievement of city-planning which this re-modelling represents. The encircling boulevards are truly magnificent avenues of trees, which mask the somewhat provincial shops behind them and bear very favourable comparison with any of the great streets of Manchester, Birmingham, and Liverpool. Again, there is no provincial town in England that has a central square comparable in magnificence and amplitude with that of Lille, and it only requires a more complete building up of its south-western side, and possibly a greater amount of interest in its furnishing features, to make it completely successful.

In joining the new town on to the old the fortifications laid out by Vauban had to be destroyed on the southern and western sides; and it might have been thought that an opportunity was here presented for a magnificent park-strip separating the old town from the new, as the amount of space occupied by the bastions and the glacis was very considerable. But those responsible for the re-modelling were probably quite well advised in neglecting to make use of this space, for it is always an extremely dangerous thing to cut off a new quarter of a town by a broad, continuous area. Even the wide boulevards of Brussels are sufficient to cut off, for business purposes, the central town from the outside communities, and the same result might have happened at Lille. As it is, owing to the skilful articulation with the old town and the formation of no more than the wide and tree-planted Boulevard de la Liberté roughly parallel with the walls, the new town merges imperceptibly into the old, and commerce has flowed freely over the ancient barrier. The citadel, or its position and star-like shape, still remains, and a very pleasant promenade and Champs de Manœuvres have been laid out between it and the town. The plan we reproduce does not show the town precisely as it exists to-day, but very nearly so; and it must be pointed out that some of the rather dull planning towards the centre of the new portion represents incorporated outlying suburbs. The Grand Place, of course, is in the old town, and near by was completed shortly before the war a magnificent new theatre.

It is indeed fortunate that Lille has escaped destruction, and we would recommend some of those councillors who are attempting to improve our English towns to visit Lille, as a good example of utilitarian planning; in this way it is of more practical value than Paris or Nancy, which, by reason of their special advantages, are hardly suitable for purposes of comparison.

PROFESSOR H. C. H. CARPENTER, president of the Institute of Metals, addressed members of that organisation on Thursday of last week at the Manchester Municipal College of Technology in connection with the movement for extending the usefulness of the Institute. Mr. J. P. Bedson, who was in the chair, said it was desired that the Institute should be able to vie with any of the other scientific institutions which must in the future play an immense part in the industries of this country. Professor Carpenter said the Institute was founded in Manchester about ten and a half years ago by ten people. To-day its membership was well over 1,000. The object of the founders was to create for that industry what the Iron and Steel Institute had done for another. He explained that three types of member were represented in the organisation—the manufacturer of materials, the engineer who used them, and the professional or scientific man. The desire was to promote in its widest aspects both the practice and the science of non-ferrous metallurgy. He pointed out that while there was a large membership this ought to be much larger, and he dealt with what appeared to be some hindrances to its extension, maintaining that scientific and practical members were mutually benefited by their meetings and the exchange of information and views.

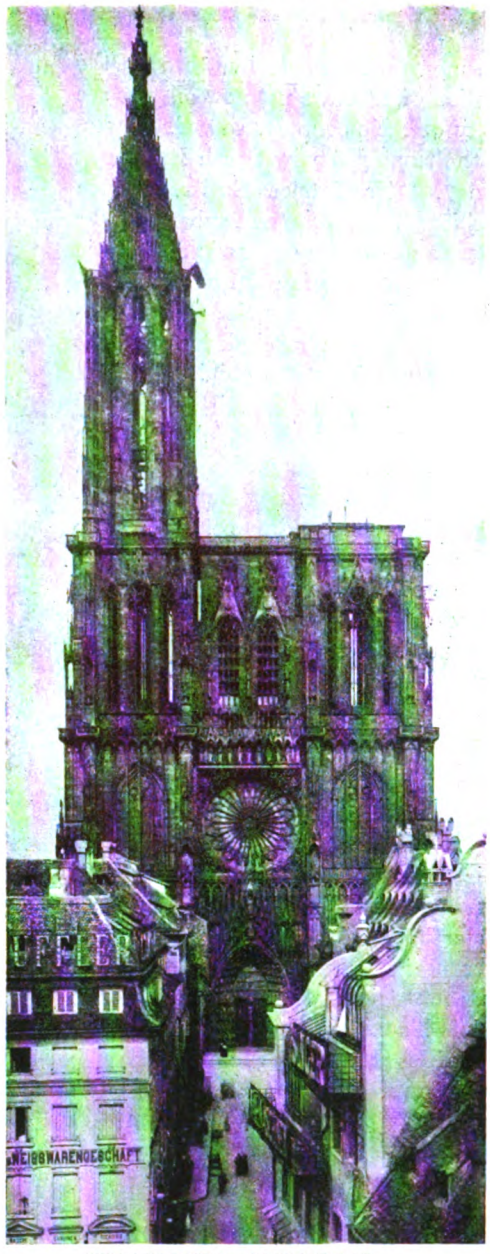
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STRASBOURG.—KLEIN FRANKREICH.

"LA FRANCE ENTIERE."

This week will see the final consummation of the hopes of France in the return of the provinces ceded to Germany by the Treaty of Frankfort on May 10, 1871. Much of the territory in question has been a debatable land, so much so that "Alsatia" was the name given to the lawless quarter near the Temple, which was beyond the jurisdiction of the law. In 1648 Upper and Lower Alsace, together with the prefectures of ten Imperial towns, were ceded to France under provisions of the Treaty of Westphalia. In 1681 the French seized Strasbourg itself, with the connivance of the bishop and other leading citizens, and the city was assigned to them under the Treaty of Ratisbon in 1684. But it was not until 1789 that Mulhouse, which formed the seat of a small independent republic, similar to those of Switzerland, was acquired. By the date of the French Revolution Alsace was as thoroughly French in sentiment as any other part of the country, a state of affairs which has continued to this date, in spite of all the attempts of its new rulers to impose their nationality on the provinces. In the war of 1870 Metz was the scene of the surrender of Marshal Bazaine's army on October 28, 1870, Strasbourg having capitulated after a brave defence by General Uhrich a month earlier. As we should expect, Strasbourg has more architectural affinity with the towns of mediæval Germany than those of France. Its great cathedral was a Romanesque foundation, which later Gothic additions have largely transformed. The two lower storeys of the western façade were carried out under Erwin of Steinbach, and were finished about 1298. The third storey of the façade was built between 1399-1419 by Ulrich of Ensingen, whose successor Hältz added the additional stage immediately below the spire. The spire itself is a masterpiece of elaborate stonework. The original design for it was even richer, but is stated to have been modified for reasons of economy. The main body of the cathedral is of lower elevation and proportion than the great square mass of the façade which terminates it, and the general lines of the interior bear a closer resemblance to English than to French mediæval work. The beautiful north porch is a very fine example of late German Gothic, while the corresponding south portal is an unusually delicate and well-proportioned example of Romanesque design. The activity of the Strasbourg chantier between the years 1180 and 1450 gave it a supremacy over other German masonic lodges, and its great masons left their impress on Freiburg and other of the German Rhenish towns. We illustrate two views of the characteristically mediæval quarters which are so abundant in Strasbourg, but the town includes many important buildings of later date. If it has not been enhanced in beauty during the 48 years of German occupation it has been improved from a modern standpoint, and brought in harmony with the wants of a flourishing mercantile community. Colmar and Mulhouse are flourishing modern towns, but Strasbourg is among the most beautiful and interesting of the older historic cities of Europe. Metz is better known as the greatest fortress in Europe than for architectural reasons, and here again great civic improvements have been carried out while under German control. All must feel regret



STRASBOURG CATHEDRAL.



STRASBOURG.—KAMMERRZELL'SCHES HAUS

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that so many who had to live through the humiliation of 1870 are not now alive to see the unity of their country, so well expressed in the toast given by Sarah Bernhardt at Nancy, "La France Entière," once more achieved. We can remember how the then German Government made diplomatic representations in Paris regarding the incident, and how it also demanded that Alsace-Lorraine should be excluded from the maps of France issued to children. We remember too how the French Archbishop of Metz took his seat in the Reichstag in the full robes of a French ecclesiastic, while Daudet draws a pathetically humorous picture of the Alsatian children being forced to learn German by a Prussian. Though over 400,000 people left the provinces when they were ceded, those who remained have been more consistently devoted to their old associations than has been the case in any other ceded territory, and we all rejoice that our Ally is now in possession of her ancient frontiers.

It is an interesting coincidence that M. Mewès, whose house for M. Guitry we illustrate this week, was an Alsatian, and was born in Strasbourg. Like most of his compatriots who were able to do so he left his native province and became a pupil of M. Pascal. His great skill in his chosen profession is evidenced to us in the work he carried out in conjunction with Mr. A. J. Davis, but the great bulk of his executed work was carried out in France.

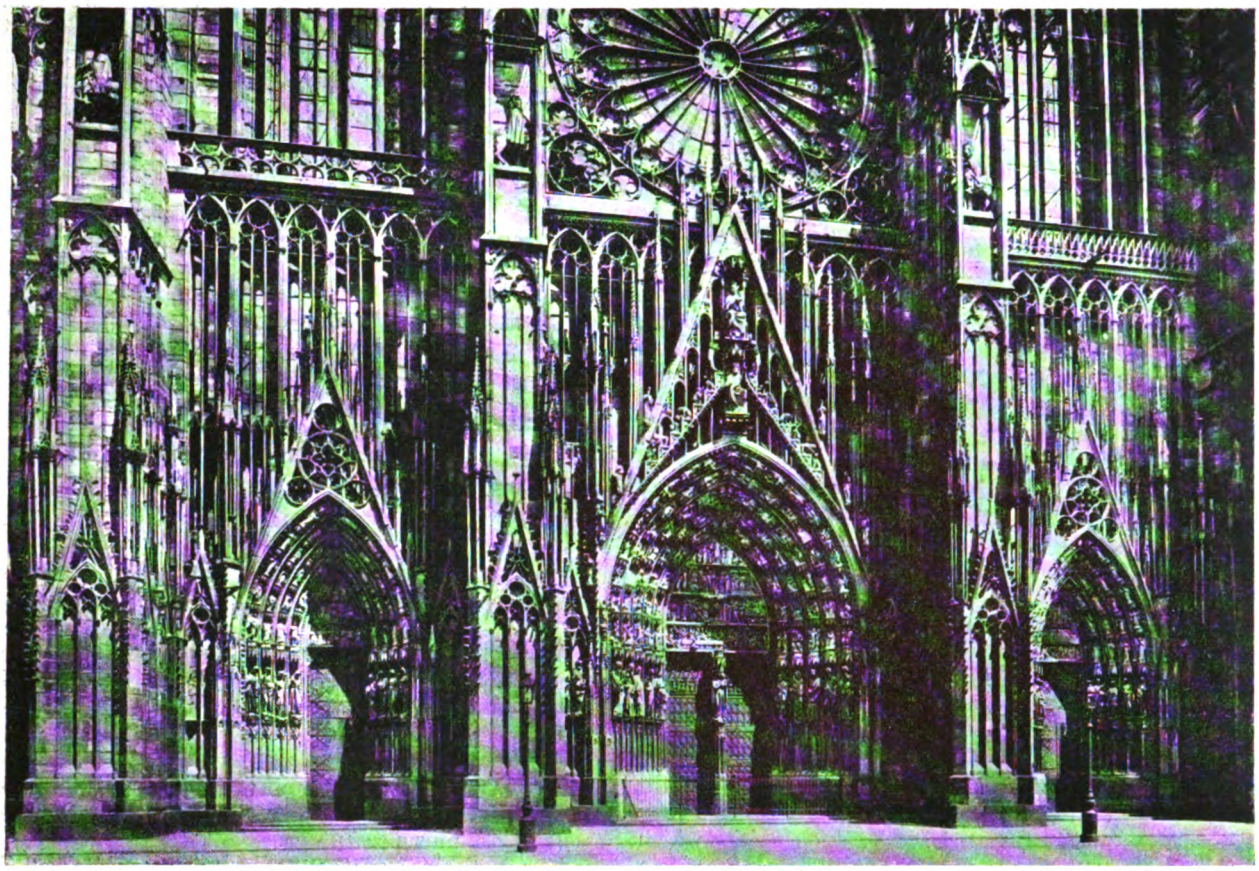


STRASBOURG CATHEDRAL.—NORTH PORCH.



STRASBOURG CATHEDRAL.—SOUTH PORCH.

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STRASBOURG CATHEDRAL.—LOWER PART OF THE WEST FRONT.

Monthly Review of the Building Industry and its Crafts.

BUILDERS AND THE LAW.

It is intended, in future issues of this Journal, regularly to devote some part of our space to articles and notes dealing with current Legislation and decisions of the Courts, so far as they may directly affect, or be of special interest to, architects, engineers, builders and others concerned in the building trade. In this preliminary notice we propose merely to indicate the probable scope of such legal articles and notes.

The different branches of the law with which the building trade is, or may be at some time or other, concerned, may almost be said to be legion. The laws relating to land, contracts, guarantees, compulsory purchase and compensation, specific performance and damages, master and servant, trade unions, companies, public health and local government are among those which most intimately concern builders and those who employ or work with them, while the law relating to building contracts alone as one section of the general law of contracts has been the subject of so many decisions as to require a separate text book in two large volumes (by Mr. Alfred A. Hudson, K.C.) for its elucidation, and is continually being added to or altered by fresh decisions.

We shall endeavour to notice and explain, in language intelligible to laymen, all decisions relating to building contracts and other cognate matters, and many decisions on other and less specialised branches of the law, which may be of special interest to our readers.

In the near future, however, it will almost certainly be necessary to give first place, in our legal columns, to articles dealing with new or contemplated legislation, of which a great crop is to be anticipated, and of which no small proportion is likely to affect the building trade.

The epoch of "D.O.R.A." and her restrictions is, happily, almost at an end, and the period of reconstruction is about to begin, a period likely to be signalised by "building" in every sense of the word. For over four years there has been scarcely any legislation other than of an emergency and purely ephemeral type. The activities of a new Parliament are likely to be quite unprecedented in extent and scale, and arrears of legislation will be quickly overtaken. New and urgent problems, either arising out of the circumstances produced by the war, or which have forced themselves into public notice during the war, must be tackled, and Acts of Parliament passed to deal with them.

One of the first of such problems to be dealt with is certain to be that of housing. Housing and Town Planning Acts on a very different scale to the tentative measures of pre-war days will be passed, and their precise details and effect will be of paramount interest to the building trade.

Closely related to the housing problem will be many new measures, shown by the war to be necessary, relating to the health of the people. A Ministry of Public Health is about to come into being, and builders have every reason to expect new and elaborate regulations in respect of sanitation and other public health matters. The time would seem to be opportune for pulling down and rebuilding inadequate and insanitary dwellings, and getting rid, at long last, of the slums which have been a long-standing reproach to this country. All this will need legislation and by-laws and regulations of considerable volume, which it will behove the building trade to be familiar with, and us to make accessible and explain to our readers.

Labour questions will be much to the fore in the period of reconstruction. We shall endeavour not only to report all legislative measures dealing with this subject, but also to inform our readers of all schemes which may come to our notice relating to the urgent problem of giving labour a direct interest in the results of its work by profit-sharing or otherwise.

It is much to be hoped that Parliament, amid its multi-

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farious new preoccupations, will find time also to take up and deal on a large scale with the cumbrous and antiquated system of laws which now regulate the ownership and transfer of land. Before the war Bills had been introduced in the House of Lords by Lord Haldane for simplifying conveyancing and land transfer, and among other things for getting rid of such mediæval and unnecessary incidents as copyhold and other specific forms of tenure. These Bills were, in themselves, of extreme complexity and intelligible only to real property lawyers. and, perhaps, to but few of them. Measures of a far simpler and yet more far-reaching type would seem to be called for in the new era upon which we are entering. The sacred legal mysteries surrounding land and all dealings with land have served their day. In the future land should be transferable with little, if any, greater difficulty or legal expense than stocks or shares.

Other subjects of legislation affecting builders will, doubtless, suggest themselves, but we have said enough to show the importance to builders in the time that is coming of keeping their knowledge of the law, so far as it concerns them, well up to date, and to justify the regular inclusion in our columns of such legal matter as we propose to insert.

A BAD REPORT AND A WORSE SEQUEL

The Colwyn Report.

It is necessary to draw attention once more to the Colwyn Report on Contracts, as a letter enclosing a copy of it has been sent to the clerks of local authorities which concludes with this clause, which we hold to constitute a direct inducement to adopt wasteful methods when it can no longer be claimed that they are necessitated by reasons of war. The report which our readers will remember, but portions of which we give again below, has been sent round to the clerks of local bodies, together with a letter urging them to prepare schemes to be put into operation in the near future. The Local Government Board wishes, and it is a laudable wish, to prevent unemployment in the building trade, but the means suggested are, we hold, radically unsound. The right step would, we think, be to do away with the system of permits for private work, a large amount of which has been held up for four years, and is now ready. Sites have been kept vacant at a great financial loss to building owners, there are unfinished buildings in every part of the country, buildings which want repairing and alterations, and new commercial schemes. All these can be carried out without cost to the taxpayers, but instead of taking the natural course, the Local Government Board urges local authorities to press on with schemes, and quotes a preposterous recommendation made by the Ministry of Reconstruction in which the following clause appears:—

4. *In conclusion I am to submit for the consideration of the Council a recommendation which has been made by a Committee appointed by the Ministry of Reconstruction to the effect that an effort should be made to place post-war contracts in advance, the contracts being arranged, if necessary, at provisional prices to be adjusted later according to revised estimates of the cost of labour, materials, and other things, or, as an alternative, on a profit basis. In this connection I am to draw attention to the enclosed copy of a Report of a Treasury Committee (the Colwyn Committee) on forms of contract for building construction work.*

Now the recommendations of the Colwyn Report were based on the erroneous belief that time might be saved on urgent war work by dispensing with the customary lump sum contract, on the grounds (*a*) that drawings were not in a sufficiently advanced state to base contracts upon, and that time might be saved by putting work in hand without definite contracts. We think it is impossible to doubt that the mistakes and confusion which must follow such a system or want of system must lead to the waste and not the saving of time, and also that of public money. During the war, however, we were lenient to the mistakes of those in authority, but we submit that such a system must be now definitely ended. Even during the war the Admiralty and Office of Works have found it possible to adhere to the ordinary lump sum form of contract. The reason for this is stated to be that the departments in question are well organised, and good organisation is essential to the carrying out of work economically and well. Clauses in the report make it perfectly clear that much trouble has arisen during the years of war because the plans of buildings have not been fully worked out, but no one but a tyro on building matters would dream of starting building operations before fully developed working drawings had been made. Any apparent gain in time by the adoption of such slipshod methods is certain to be wiped out in the subsequent delay and confusion which must take place. The wisest course for those who have to hustle is to bear in mind the old saying *Festina lente*.

Extracts from the Report of a Special Committee on Form of Contract for Building Construction Work (Colwyn Committee).

Types of Contract in Use.

The committee finds that the following types of construction contract are all in use at the present time, viz.:

(1) Lump sum or fixed price.
(2) Schedule of rates.
(3) Cost plus profit on sliding scale, increasing with economy, with or without upward limit.
(4) Cost plus fixed amount of profit.
(5) Cost plus percentage.

The last three are generally known as "Cost Contracts." The committee further finds that the majority of the contracts recently placed are cost contracts in which the contractor usually receives as profit a percentage of the total cost of construction, thus giving him a direct incentive to run up the cost of the work. This factor is considered by the committee as lending itself to considerable abuse unless certain safeguards are introduced.

* * * *

With the exception of the evidence given by the representatives of the Admiralty and the Office of Works, the witnesses were unanimous in their opinion that, having regard to existing conditions, the lump sum or schedule of rates form, although desirable, is not generally feasible in large contracts.

Special circumstances facilitating placing of last-mentioned Contracts.

The representative of the Office of Works stated that since the commencement of the war up to the present time, the contracts placed by him had, with few exceptions, been lump sum and schedule of rates contracts on tenders.

It is apparent that his ability to obtain lump sum tenders is due in no small degree to the following special circumstances, *e.g.*, that a well-established system has been built up as the result of years of organisation: that as a preliminary to placing any contract the most complete plans and specifications are invariably worked out, the contractor being furnished with such details as enable him to calculate with accuracy the commitment he is assuming: and—the most important factor of all—that the Office of Works undertake to ensure the punctual and regular delivery of all requisite material, an undertaking which they claim owing to their special facilities they are in a position to carry out. Thus the contractor is able, when quoting, to eliminate risk of delays in construction due to non-delivery of material.

Furthermore, it appears that this contract is hardly a lump sum contract in the ordinarily accepted sense, as the Office of Works assume responsibility for any rise in the price of labour or material subsequent to the placing of the contract, as well as for any excess wages due to overtime work.

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Exceptional present day factors.

In arriving at any conclusion it must be borne in mind that many exceptional factors exist to-day, which a contractor, when considering a tender on a lump sum basis, has to take into account. For instance (*a*), the difficulty in procuring labour; (*b*) the uncertainty as to rates of wages; (*c*) the widely varying efficiency of present-day labour; (*d*) the difficulty above referred to of obtaining material and the frequent delays in delivery during which labour and overhead charges continue to run.

* * * *

Lump Sum or Schedule of Rates Contracts not at present generally feasible.

Whilst the committee considers that in principle lump sum or schedule of rates contracts are very desirable where still able to be negotiated, it has formed the conclusion—though with considerable reluctance—that, having regard to existing conditions, this class of contract could not now be placed on reasonable terms, except in special cases. The committee, however, strongly recommends that immediately normal conditions are re-established lump sum contracts shall again be adopted.

Cost plus Profit Contracts recommended subject to safeguards.

For the above reasons the committee finds that it is to-day necessary to have recourse in the majority of cases to the cost plus profit contract.

* * * *

Contractors' profit to be fixed on estimated cost at time Contract is placed.

As a means of countering the very objectionable principle, "the greater the expenditure the greater the profit," the Committee recommends that whilst the contractor is recouped his actual expenditure properly incurred on the works (subject to what is mentioned below), his profit shall be a fixed sum based on a percentage of the estimated cost of the works, this estimate being prepared by the Government Engineer either on the commencement of the works or alternatively in an early stage of construction.

* * * *

Treatment of establishment charges and hire of plant.

As regards establishment charges the Committee recommends that the contractor shall be compensated by a fixed sum being an agreed percentage of the estimated cost of the labour to be employed. No establishment charges would in that event be included in the estimated cost on which the contractor's profit would be calculated. In this connection a line should be drawn clearly dividing administration from labour.

The Committee further recommends that the hire of plant (the basis for payment of which is referred to later), should also be excluded from such estimated cost.

* * * *

Bonus for expedition.

The Committee further recommends, with a view more directly to inducing economies, that an additional incentive might be held out to contractors in the shape of a provision that a bonus at the discretion of Government shall be added to the contractor's commission where construction is completed within a shorter period of time than that contracted for, without any sacrifice to efficiency.

* * * *

Profit to be fixed by tender.

As regards the percentage or amount of contractor's profit the Committee is of opinion that, except in very special cases, this should be fixed by competitive tender.

Danger of unduly expensive contractors' staff.

The Committee further deems it necessary to point out the danger of contractors, who may have surrounded themselves with an efficient staff, being tempted to allocate to Government work men of a more expensive character than the nature of the contract warrants, rather than run the risk of losing their services. By such means the cost to Government would be unjustifiably increased. Safeguards should be introduced to prevent such a possibility.

Treatment of heavy plant.

As regards treatment of heavy plant, the Committee considers it desirable that, wherever possible, this shall be provided by the contractor at an agreed rental. The practice of basing such rental on a percentage per mensem would appear unobjectionable, provided—and the Committee attach considerable importance to this—that such rental does not exceed in the aggregate a fixed percentage of the estimated cost of works.

Figures must necessarily vary with particular cases, but from the evidence before the Committee 2 per cent. per mensem on the value of the plant brought on to the works would seem under ordinary conditions to be a reasonable rental, with a mixiumum, say, of 5 per cent. on the total estimated cost of works.

* * * *

Prevention of competition for labour.

In order to avoid the danger of competition for labour referred to above, the Committee recommends that the clause adopted in the contracts of certain Departments restricting the rates of wages to the standard rates fixed by a Building Labour Committee representing all Government Departments concerned, should be embodied in all contracts and rigidly enforced, thus prohibiting the contractor from holding out to workmen—as an inducement to employment—Sunday labour, a guaranteed number of working hours per week, offers of hours of work or pay in excess of the normal rates, or other special considerations.

Recommendations as to plans in advance—selection of contractors and supervision.

The Committee would further emphasise the absolute necessity of maintaining the ordinary safeguards, such as the preparation in advance of adequate and complete plans and specifications, and that contractors to be employed, particularly on extensive works, should be selected as far as possible from firms of experience and repute. Those contractors who in pre-war days have been dependent on economies for their livelihood and who after the war intend to return to the same methods of business, cannot afford to allow their staffs to form the habit of working on extravagant lines.

* * * *

Construction by Departments themselves recommended in certain cases.

From the evidence before the Committee it appears that certain Departments have in some cases undertaken with good results their own construction work without employing contractors. Where Departments have an adequate expert staff and the necessary plant, this is a course to be recommended.

* * * *

Resumé.

To summarise the position the Committee recommends—

(1.) That where, as in the majority of cases, a lump sum contract is no longer practicable, the basis of cost plus a fixed profit to the contractor be adopted in lieu of a profit increasing with expenditure.

(2.) That as an additional stimulus to the contractor he shall be granted at the discretion of Government a bonus for expedition in construction.

(3.) That prior to the contract being placed the work contemplated must be set out in approximate detail, with drawings and specifications, in order to secure that the estimated cost, on which the contractor's remuneration is to be based, is as accurate as possible.

(4.) Careful selection of contractors for the larger contracts, and, most important of all, close supervision of the work by a competent staff. Salaries paid by Government for efficient inspection should be saved over and over again.

(5.) Competition for labour amongst contractors, or by Government Departments, engaged on Government work by the holding out of special inducements, must be prevented.

(6.) The immediate establishment of a Standing Committee to ensure uniformity of procedure.

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A CONTRACT FOR GRAVEL, SAND & STONE.

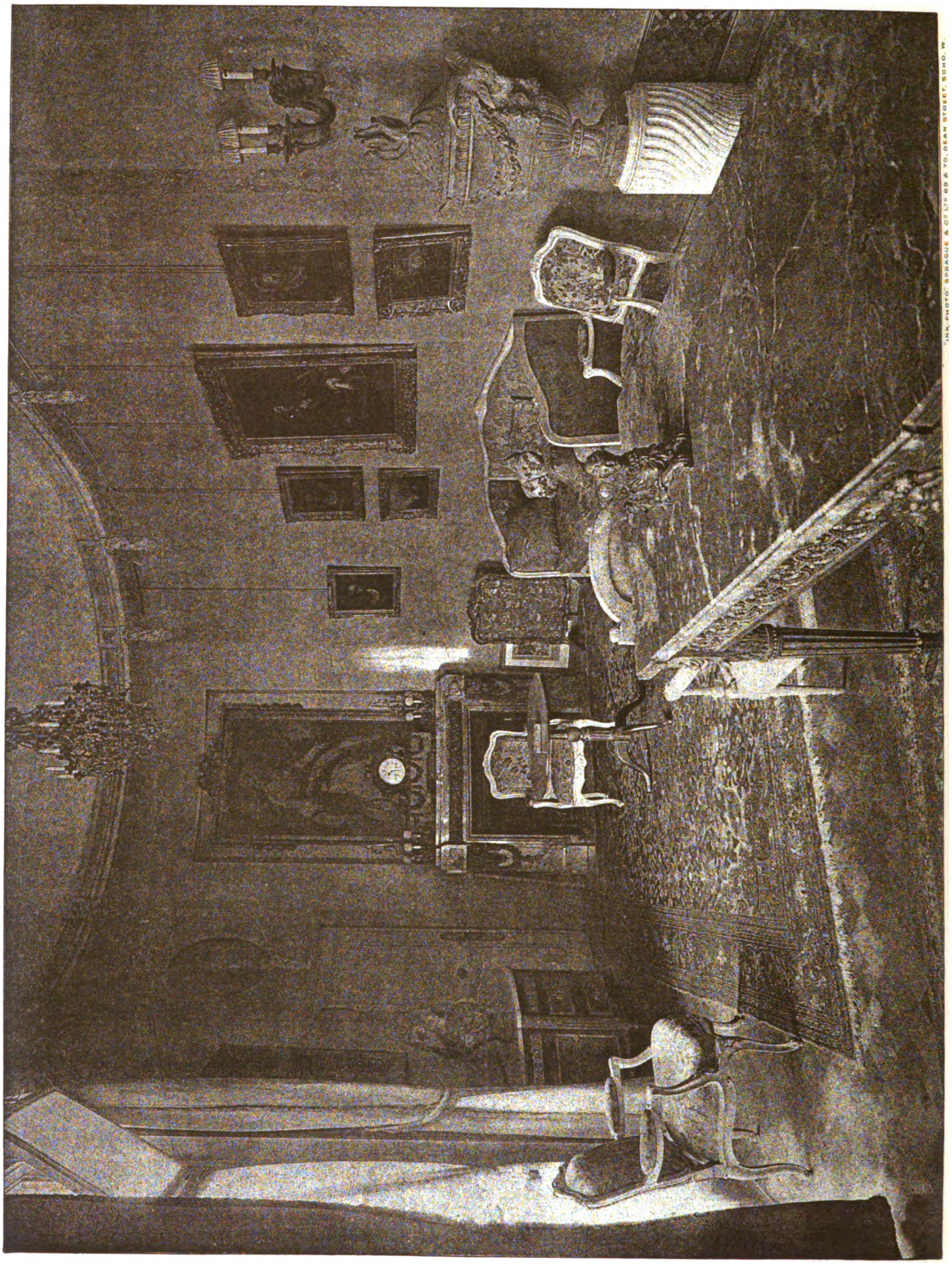
In the Court of Appeal on Friday, October 25, the Master of the Rolls, Lord Justice Duke and Mr. Justice Eve heard an appeal by Messrs. William Griffiths & Co., Ltd., contractors, of Bishopsgate, London, E.C., from a judgment of Mr. Justice Neville in favour of Mr. F. G. Sage and Mr. A. E. Rouch, trustees of the late Mr. Frederick Sage, shop-fitter, of Gray's Inn Road, London, W.C., concerning an agreement relating to the digging and removing of gravel, etc., from land at Edmonton.

The Master of the Rolls, in delivering judgment, said that in the Court below the trustees of Mr. Sage took an action to obtain a declaration of the rights and liabilities of the defendant company with regard to the digging and removing of the gravel, sand and stone from land belonging to the plaintiffs, and in respect of which certain rights were granted by various agreements to the appellants and their predecessor, Mr. William Griffiths. The rights of the parties depended in part upon the true construction of an agreement of May 19, 1899, and in part upon subsequent agreements and events that happened after the expiration by time of the last of a series of agreements. The first question therefore was what was the true construction of the agreement of May 19, 1899, because although that agreement had in fact expired still the terms of it were binding upon the parties in the events to which his lordship would refer, except so far as subsequent events required an obligation with regard to dates. By the terms of the agreement plaintiffs conferred rights upon Mr. William Griffiths to excavate and take away for his own benefit, gravel, stone and sand from beneath the land in question, and they imposed upon him an obligation to restore the surface of the land, and make various payments. He was to have the use of a pit-road, and keep it in fair repair, and the agreement was limited to the period from May 31, 1899, to November 30, 1900. Mr. Griffiths was to excavate and remove all the material named to a depth not exceeding twelve feet of the level of the land; he was also under an obligation to remove the overburden and replace it. He was to pay 1*s.* 3*d.* per loose yard of gravel, stone, or sand. The clause of the agreement on which the contest had mainly turned provided that Mr. Griffiths should pay for not less than 300 loose yards within any period of one month during the period from May 31, 1899, to Nov. 30, 1900. That meant an obligation to pay every month the fixed sum of £18 15*s.*, but the agreement provided that credit for such payments should be given to Mr. Griffiths so far as they were made in respect of material not actually removed, upon removal there by him before November 30, 1900. In his lordship's opinion the latter date was of the essence of the contract. It was said on behalf of the appellants that the clause must be inconsistent with another clause which provided that all gravel, stones and sand excavated and paid for should be deemed the property of Mr. Griffiths. In his lordship's opinion when the agreement was read as a whole there was no discrepancy between these two clauses. The first-mentioned clause imposed an obligation to remove on or before a fixed date; if he did that, then he was entitled to credit for all sums paid in respect of it. In his lordship's judgment the agreement provided for a fixed monthly payment; the amount was fixed by reference to the number of loose yards of material taken, but it was the same as if the actual sum of £18 15*s.* for each month had been inserted in the agreement. What took place was that the material was not all removed; the agreement was not worked out during the eighteen months. Then the parties agreed to extend the time to another year—to 1901—and then next to 1902. By that time the material had been removed in respect of the first piece of land, and in respect of the new portion similar terms were accepted, and a year and a half was given in respect of it, the dates running from July 1, 1902, to January 1, 1904. Again the actual date did not appear to have been observed by the parties because the matter ran on for two or three years. Then a further agreement was entered into on April 20, 1907, and meantime Mr. Griffiths had sold his business to a company, and the agreement was with the company. Again further land was added, and the dates were altered again, only this time intead of the period for excavation and removal being a year and a half it was extended to two years, and ran from Christmas 1906 to Christmas 1908. Again the excavation and removal did not appear to have been carried out within the stipulated period, but ran up to 1909. Then on July 25, 1910, the last of this series of written agreements was entered into, and again further land was added. There was again an extension of time, but ultimately with regard to the added land everything was to be excavated and removed by May 31, 1912. That was the last date in the written agreements between the parties. Now the material was not so removed, nor was it excavated, and after May 31, 1912, although there was no formal written agreement between the parties, they continued to act as if there was an agreement between them, and the acts on each side were sufficient witness, in his lordship's judgment, that the agreement was to continue upon the footing of the old agreement so far as applicable without any date being fixed. That meant that after May, 1912, the appellants continued to excavate fresh ground, remove material, and make monthly payments to the trustees from time to time. On these facts Mr. Justice Neville drew the inference that a fresh agreement was entered into between the parties upon the same terms as the first agreement of 1899, subject only to there being no fixed dates; in other words the agreement was continued subject to its being terminated by reasonable notice by one side to the other. No notice was given, and the agreed payment of £18 15*s.* per month continued to be paid down to Christmas, 1915. In August 1915, a question arose on difficulties occasioned by the war, and from Christmas, 1915, to Midsummer, 1916, the trustees agreed to waive the payments. After July 1, 1916, the trustees claimed in this action that the payments should continue. The writ was issued on January 30, 1918. In these circumstances his lordship was of opinion that the true position of the parties was that they were bound together by the contract to be implied from their actions. Substantially, although perhaps not technically, the judgment of Mr. Justice Neville was right. By that judgment the Court below declared that the agreement dated July 25, 1910, was still subsisting but subject to revocation by either party at reasonable notice. It was really (said the Master of the Rolls) that subsequent to May 31, 1912, a new agreement had been made between the parties, and that such new agreement was still subsisting, and was upon the terms of the old agreement except as regarded a fixed date. The Court had been told that since Mr. Justice Neville's judgment the agreement had been terminated by a month's notice as on August 30, 1918. Appellants had urged that the learned judge was wrong in dealing with the payment as a rent or royalty, and in the view of the Master of the Rolls that was an erroneous way of regarding it. It was a fixed payment, obligatory upon the appellants to pay, irrespective of any label or ticket that was attached to the contract. The parties had continued to act upon the terms of the old agreement, and according to the figures which Mr. Matthews had given the Court appellants had continued to make payments for a year and a half. Mr. Matthews had said that he was prepared to prove that the quantity of material contained in the site would work out at a certain quantity, and that appellants had overpaid to the extent of £361. Appellants were bound to make the payments so long as the agreement between the parties lasted. They could not claim the benefit of the agreement and repudiate the terms of the minimum monthly payment they were bound to pay. For those reasons his lordship was of opinion that the appeal failed, and that, with slight verbal alterations, the judgment of the learned judge should stand.

Lord Justice Duke and Mr. Justice Eve expressed agreement, and the appeal was accordingly dismissed with costs, and the judgment of Mr. Justice Neville deciding that the trustees should recover from appellants the sum of £337 10*s.* for the period covered by the action was affirmed in substance.

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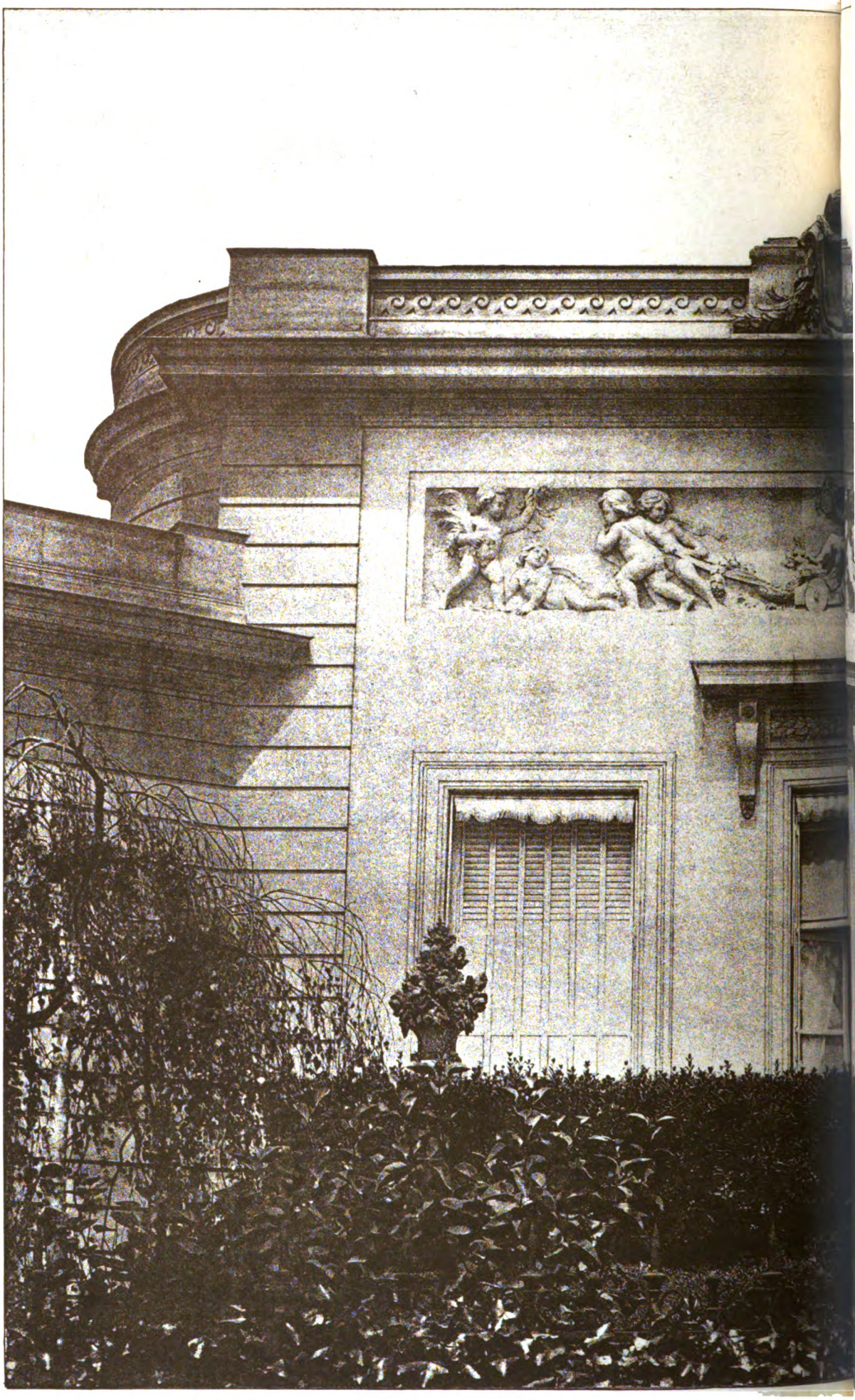
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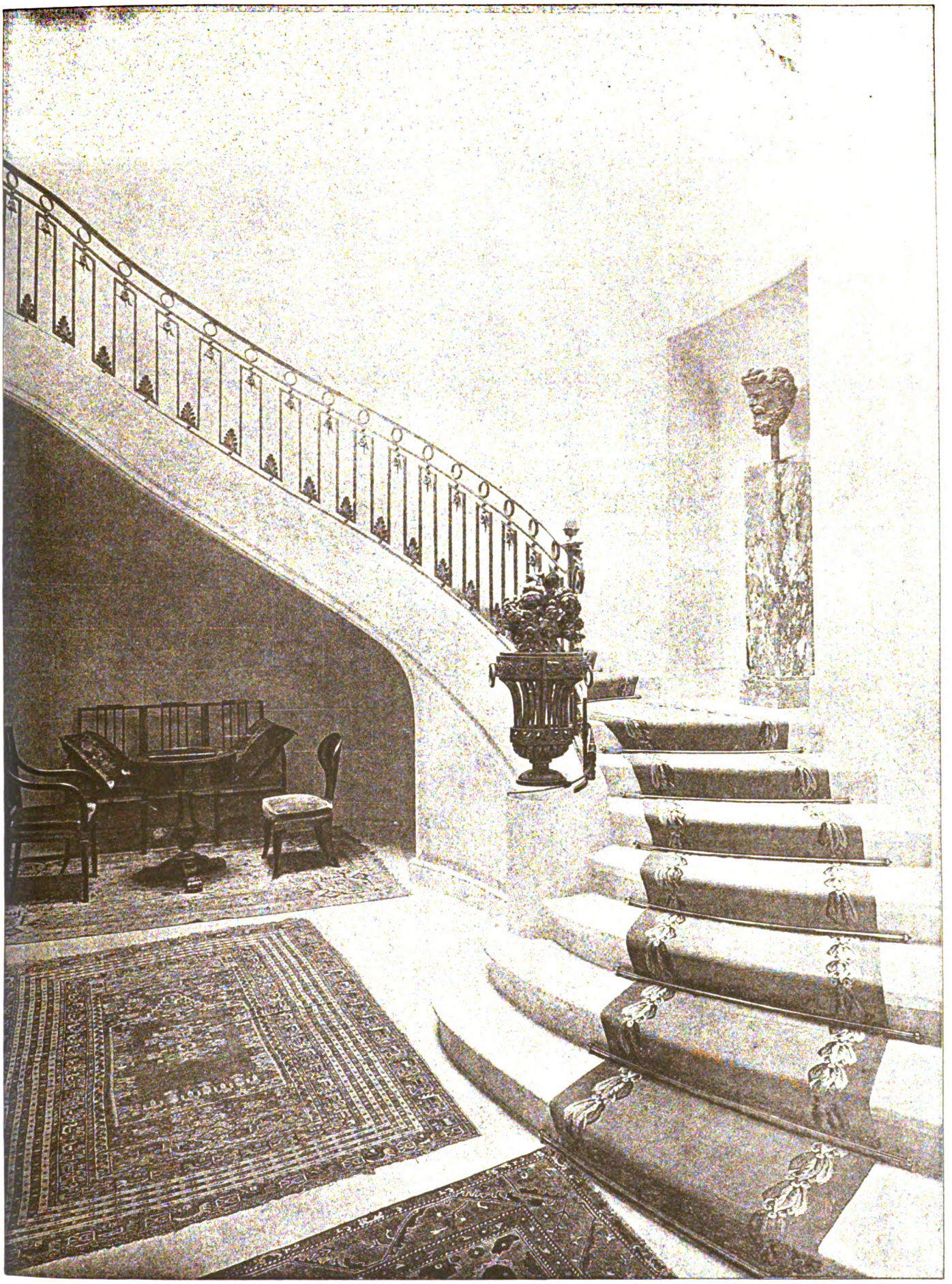
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M. GUITRY'S HOUSE.—STAIRCASE. See inserted illustrations.]

EXHIBITION OF AMERICAN TIMBER AT THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Précis of the remarks of John R. Walker, Trade Commissioner of the American Government, made at the Royal Institute of British Architects in connection with the Exhibit of American Timber, October 24.

I HAVE gathered together, within the limitations of war times, this small exhibit for the purpose of showing to the British timber-using public the American woods and the shapes and grades which will be available for the work of reconstruction after the war in the largest quantities and upon the most favourable basis of cost.

The architects of this country are to some extent familiar with the species of the timber here exhibited—Southern yellow pine (pitch pine), and its related species; Douglas fir (Oregon pine), Californian redwood (Sequoia), White pine (yellow pine), and Californian sugar pine—but I am certain that you are entirely unfamiliar with the dimensions and the grades or qualities of these timbers which are exhibited here. These shapes and grades are, however, those which are universally employed in construction work in America, and I may say that America produces and uses more timber than any nation in the world.

The standard grades and sizes of American timber are unknown in the British market, for the reason that the building practice of this country was established years ago in relation to the soft woods of the Baltic. In America our general construction work is done with the hard pines of the South and of the West, and the standard of sizes we have evolved in connection with these hard pines is different from the standard of sizes which you employ in this market. This difference in sizes rests upon a sound scientific basis, namely, that the strength of the harder pines which we use is greatly superior to the strength of the softer northern woods which this country employs, and, generally speaking, the dimensions which we employ for a given purpose are smaller than those you employ for the same purpose here.

I desire to urge as strongly as I know how upon the British timber-using public that in the reconstruction programme after the war full provision be made for the employment of our American soft woods in the standard grades and sizes in which they are commonly manufactured, and in this connection I would call your attention to the fact that the methods of grading and manufacturing in British Columbia are identically the same as in the Pacific north-west of the United States.

The importance of this question from the broad economic standpoint is that in America we are producing for use some 15 million standards a year of these construction woods, and all according to the standard of grades and sizes here exhibited. Production upon this enormous scale has made it possible to effect tremendous economies in the manufacture of timber as well as to develop a high degree of efficiency in its manufacturing and seasoning. It is clearly to the interest of this country to take advantage of the economy which results from this quantitative production, and not to require the American manufacturer to produce a special product for this market which is not consonant with the physical properties of timber which we are manufacturing and which involves a wastage of raw material and a very greatly enhanced price to the user.

Millions of standards of this material are carried in stock ready for shipment by American and Canadian mills, and if this country makes provision for the use of this material in these standard grades and sizes, the available sources of supply for this market will be practically doubled. To illustrate concretely the general situation which I have described, I would state that the practice in America is to manufacture timber to even inches in width, that is, 4, 6, 8, 10 and 12 inches. Scantlings are manufactured in sizes 3 by 2, 4 by 2, 6 by 2, 8 by 2, 10 by 2, and 12 by 2, and the same widths 2½ inches by 3 inches in thickness. These sizes, however, are the nominal or green sizes of the material, and in drying these dimensions are reduced. Since the rate of shrinkage in different scantlings is not exactly the same, it is the general practice of the American manufacturer to run scantlings through an equalising machine after they are dry in order to bring them to an exact standard size.

The standard finished size, therefore, of a 4 by 2 is 3⅝ by 1¾; of a 6 by 2, 5⅝ by 1¾; of an 8 by 2, 7⅝ by 1¾; of a 10 by 2, 9⅝ by 1¾; of a 12 by 2, 11½ by 1¾. My proposal is that, in view of the greatly superior strength of Southern yellow pine and Douglas fir, the British architect and builder should employ in the place of the usual 7 by 2 Baltic scantling a 6 by 2 American scantling, finished in the scant dimensions above described; in the place of a Baltic 9 by 2 an American 8 by 2; in the place of a Baltic 11 by 2 an American 10 by 2; in the place of a 2½ by 7 Baltic an American 2½ by 6 or an 8 by 2; in the place of a 2½ by 9 Baltic an American 2½ by 8 or a 10 by 2, and in the place of a Baltic 2½ by 11 an American 2½ by 10 or 12 by 2. The employment of these smaller dimensions of American timber would gain 1¾ inches in the height of your rooms and you would still have a margin of superior strength in your floors.

The comparative strength values of these woods which I have indicated are based upon tests that have been made in this country and our own, and can be verified generally by a comparison of the weight of the American woods with the Baltic woods, for the strength and the weight of wood are usually in direct relation to each other. The Scientific and Industrial Research Department of your Government, however, is now outlining the plans

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for a series of tests to determine the accuracy of these claims, and when they are completed you will have an authoritative basis upon which to proceed.

There are two points in connection with our Southern pine timber to which I desire to call your special attention. You will observe here that a considerable portion of this material consists of sap wood. I have frequently seen in English text books sap wood described as "immature" wood. This, however, is altogether an inaccurate description. Structurally the wood is not immature, and it has all the strength and vitality of the older heart wood. The only valid objection against sap wood is that the sap of the tree which circulates through it contains an acid which, if not removed through drying or by other means, will produce stain and dry rot if the wood remains in a moist state and with an absence of ventilation. However, you will find no stain upon the sap wood which is exhibited here, and this for the reason that all of this wood has been thoroughly dried; in fact, it has been kiln dried, which completely removes the sap and destroys the tendency towards stain and dry rot. Since a considerable portion of the average Southern pine tree consists of sap wood, a tremendous saving in cost may be effected by employing this wood, and when it has been thoroughly dried it will serve every purpose that the heart wood will serve in the interior construction of a building.

The other point I desire to discuss is the question of kiln drying. This is a development of comparatively recent years, which, like all new developments, encountered opposition at the outset and a widespread prejudice still exists against it in this country. This prejudice arose because in its experimental stage kiln drying was not done as well as it might have been, and secondly, because of that inertia which opposes every innovation. Kiln drying has, however, been perfected, and I can say positively that kiln-dried timber is superior to air-seasoned timber. Kiln drying materially increases the strength of wood as compared with air-seasoned material. It is the quickest and the cheapest way to dry wood, and it practically destroys the tendency of the wood to absorb moisture. By the same token it limits the extent to which wood contracts and expands under variations of temperature; it heightens the lustre of wood, and, finally, it lightens its weight. No more convincing proof that it does not make wood brittle or otherwise destroy its utility can be found than that your nation and ours are now kiln-drying the wood which they use in aeroplane construction.

This is the first time that the attempt has been made to study our timber trade as a whole with a view to seeing if it might be possible to place the whole trade upon a sounder basis. My purpose in coming here is not to attempt to capitalise the fine feeling of friendliness that exists between our countries. I started upon this investigation before my country entered into the war, and its foundation rests upon a much broader basis. All the world is interested in the conservation of its natural resources; our nation is especially interested in the conservation of timber because it possesses the largest timber resources of any country in the world except Russia, if we include Siberia with European Russia. I am here, therefore, to discuss with you in a scientific spirit the question of how we can collaborate to put to its best use the immense timber resources of which my country is the steward.

THE TOWN PLANNING INSTITUTE.

Professor S. D. Adshead (President) took the chair at 92 Victoria Street on November 1 at a meeting of the Town Planning Institute, when a discussion took place on "Housing Schemes." The subject was introduced by Mr. P. B. Houfton, who dealt with the three main subjects of land, lay out, and the house. He strongly emphasised the four points on which he considered the success of a housing scheme depended, viz. (1) The house, planned on broad lines, with proper regard to health and convenience, aspect and homely beauty; (2) the town-planned road, so that the better kind of house can be built with due regard to economy; (3) sufficient land for house, garden, access and open spaces, &c.; (4) town planning so that land may be acquired at reasonable cost. Mr. Houfton criticised what he described as the unfortunate set of plans which had been issued and the official memorandum for the guidance of local authorities, and said that when they considered these plans were intended to shape the future environment of four or five millions of people, at a cost of a hundred millions of money, one would think the occasion called for a serious effort to put forward the best and most modern ideas available. As it was that collection seemed to have been made almost with levity, so haphazard and inconvenient was the planning in many cases Too little regard was given to aspect, back doors opened on to baths and kitchen fireplaces, and in two cases there were no less than four doors between scullery sink and larder bench. With some experience of the keen interest which women's organisations were taking in this question, he ventured to say that local authorities who adopted these plans in their present form were surely laying up for themselves a day of reckoning. Unfortunately, too, the R.I.B.A. competition could not be said to have been an unqualified success. In concluding his address Mr. Houfton dealt with the question of who is to build the new houses and said: "In this respect I think we shall have to rely more and more on municipal action. No one, taking a dispassionate view, can say that the speculative system has given anything but evil results, or that a drastic change is not urgently needed. From my own experience I can say that even well-intentioned private schemes are not always 'safe for democracy.' The excellent work of legitimate public utility societies will grow, no doubt, and supplement municipal action, and there will be a sphere of usefulness for the private speculator as master builder. The problem is to devise a method which has neither the evils of the speculative system nor the defects of competitive contracts. This is a question for local industrial councils to consider. The solution may be in some form of co-operation between groups of builders acting for the local authority on equitable terms arranged by negotiation. There are difficulties to be overcome, but it is a question whether the competitive system has not overreached itself, and whether the economies due to co-operation will not outweigh the economies which competition is supposed to secure. Municipal housing schemes open up possibilities of communal service of many kinds which are impracticable for speculators. There is, for instance, the question of the supply of hot water from the waste heat of electrical stations. Eighty-five per cent. of the heat produced from the coal escapes in the form of hot water, and it is a problem whether this hot water might not be laid on for domestic purposes in suitable cases. Municipal kitchens and laundries come within the scope of practical suggestions, particularly in cotton spinning and weaving districts where women are habitually employed. The opportunities for domestic training which services of these kinds afford should not be overlooked. There are possibilities also in the direction of large common gardens for groups of houses, with combined tool sheds in place of a crop of untidy structures which allotment gardens usually produce. The question of joint piggeries is also worth attention. But perhaps the most revolutionary possibility of all is the supply of cheap electricity for heating, lighting and cooking from central power stations. In this respect the Coal Conservation Committee's Report contains proposals of the most far-reaching character for the future amenity of town life. When these proposals mature into practical shape and the smoke clouds of the coal age pass away, we shall see the dawn of a neotechnic future, in which cleanliness and colour and beauty will come to our towns and cities, and herald a new phase of civilisation which at present we can hardly conceive."

Mr. W. Harvey, F.R.I.B.A., proposed a vote of thanks to Mr. Houfton, and urged that the aim should be to give the garden round the house rather than to rely on allotments. He also suggested that Mr. Unwin might tell them something as to the use of new materials.

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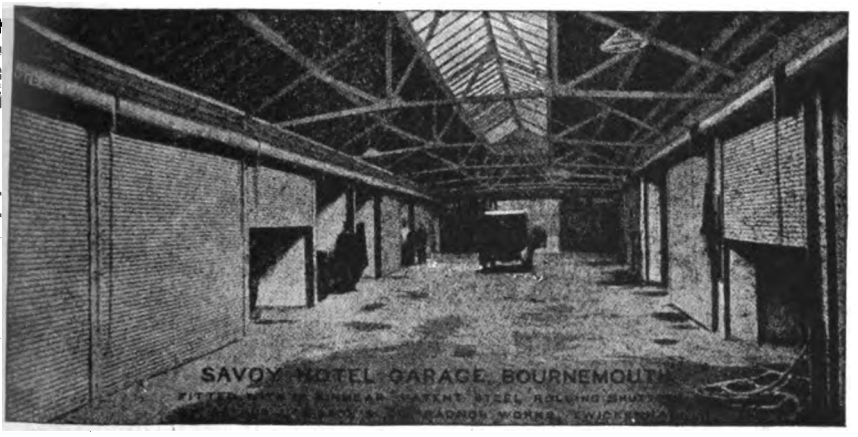
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Mr. Raymond Unwin, in seconding the motion, pointed out the responsibility which rested on the man who had to design a cottage in which a family would live for probably a hundred years; and said that whilst standardisation might be good up to a certain stage, yet an individual touch should be given to each house. He advocated co-operation amongst architects in housing schemes; as it was absurd to say the man responsible for a site of say, a thousand houses, could find the time to design each house. Touching on the subject of new materials, he considered that brick, stone, slate and tiles would still continue to be largely used, although concrete in some form would probably be used for cottage building. The lack of transport facilities would, however, be thought, lead to the revival of the use of local materials.

Mr. Barker sketched a scheme for giving a central supply service of electric light, gas, hot water, &c., for a community of 120 houses, which he thought would mean a charge of about £10 per house.

Mr. T. A. Lloyd urged the adoption of town-planning schemes in connection with housing schemes, and gave instances showing how the cost of land was reduced by the scheduling of a considerable area.

Mr. F. Litchfield, Mr. R. H. Aldridge and the Chairman also took part in the discussion. Professor Adshead warned the meeting that there was just a danger that in trying to increase the size and comfort of the houses they might lose housing altogether.

GENERAL.

It is proposed to erect at Bray, co. Wicklow, a cottage hospital.

Mr. John Rigby, engineer, of 1 Curzon Road, Southport, left estate valued at £40,977.

Private W. E. Morton, killed in action in October, was the son of Mr. Morton, builder, Pyne Street, Deptford, S.E.

As a war memorial the Grimsby Hospital Committee have decided to build a convalescent home at an estimated cost of £50,000.

The Airdrie Town Council have decided to raise a monument in the town to the memory of the men of the district who have fallen in the war.

It is proposed to erect new Roman Catholic schools at Liverpool in connection with the Church of the Holy Cross to provide accommodation for 1,000 children.

As a memorial to those who have fallen in the war in connection with the Wolverhampton district it is proposed to erect a public hall at a cost of £60,000.

The Kesteven County Council have appointed a special committee to select an architect to submit plans of new County Council offices to be erected at Sleaford.

Mr. B. Shipman, builder, Ratby, Leicester, died suddenly last week at the age of fifty-eight years. He was a member of the local Council and an overseer of the parish.

It is proposed to erect a memorial to the memory of the late Mr. William Willett, founder of the daylight-saving scheme. The Surrey County Council are to take the scheme in hand.

It is proposed to erect about 300 houses at Wednesbury, each to be provided with a garden plot. The Patent Shaft and Axle-tree Co. have agreed to hand over a site of twenty-six acres for the purpose.

The Batley Hospital Board have under consideration a proposal for the enlargement of the hospital buildings as a war memorial, including the erection of an operating theatre and an administrative block.

A memorial window erected at St. Luke's Church, Newport, Mon., has been unveiled. It has been placed there to the memory of the men of the Monmouthshire Regiment who fell in the second battle of Ypres, May 8, 1915.

Two memorial windows have been unveiled at St. Tyfaeloys Church, Pontlottyn, which have been placed in the church to the memory of Lieutenant Hugh Howells, R.F.C., and Sapper Willie D. Green, of the R.E.

The Ashton-under-Lyne Town Council have decided to apply to the Board of Trade for sanction to borrow £15,309 for the purpose of defraying the cost, charges, and expenses of the proposed extension of the tramways depôt in Mossley Road. This includes the cost of land and the purchase of a residence adjoining the present depôt.

The reconstruction of the devastated Verdun area—the scene of some of the worst destruction in France—has been entrusted by the French Government to the War Victims' Relief Committee of the Society of Friends, who have been at work in France since 1914, and have now nearly 500 men and women engaged. The rebuilding of forty villages is already planned.

The St. Asaph (Flint) Rural District Council have under consideration a scheme for the erection of working-class houses in the district. It is estimated that the minimum requirements of the rural area are at least seventy more houses, and inquiries are to be made for sites for blocks of workmen's dwellings in the parishes of Meliden, Dyserth, Rhuddlan, and St. Asaph.

A public meeting at Clee Hill (Ludlow) has unanimously decided in favour of a scheme for the construction of a light railway to serve the Henley, Knowbury, Bitterley, Clee Hill, Doddington, and surrounding areas, and a representative committee has been formed to determine the best route for the railway and obtain information as to the probable agricultural and passenger traffic.

Mr. Charles A. Broadhead, A.R.I.B.A., who at present holds the position of acting borough architect to the Swansea Corporation, has been selected from seventy applicants to fill the position of borough architect to the Rotherham Corporation at a commencing salary of £500 per annum. Mr. Broadhead, prior to removing to Swansea, was for several years an assistant in the office of the city architect, Nottingham.

The fifth lecture of the Industrial Reconstruction Council will be given by kind permission of the Worshipful Company of Saddlers in the Saddlers' Hall, 141 Cheapside, E.C. The subject is Labour and Industrial Development, and the lecturer Mr. Ernest J. P. Benn, chairman of the Industrial Reconstruction Council. The date is Wednesday, November 27, and the chair will be taken at 4.30 p.m. by the Right Hon. J. H. Whitley, M.P.

The Weston-super-Mare District Council held a meeting on Wednesday, when plans and sections, prepared in consultation with representatives of the local Trades and Labour Council, submitted by the surveyor, for the erection of eighty dwelling-houses for the working classes in Uphill Drove Road, Bridge Terrace, and Milton Road were approved, and the clerk was instructed to make formal application for a loan.

Mr. Samuel Sewell, hon. secretary of the London District of the Institute of Journalists, is standing for Parliament as a representative of trade journals for the district of the Hemel Hempstead Division of Hertfordshire. Mr. Sewell states that he will, of course, support the Coalition Government although standing as an independent candidate. Mr. Sewell's election will mean the first representation in the British Parliament of a trained journalist representing the trade and technical press.

The housing scheme for Northwick, Worcester, is to be in one of the healthiest positions in the city; the sub-soil is sand and gravel for a depth of 10 to 20 feet. The roads have been already made and channelled, with sewage and surface drains, and water and gas has already been laid on. The position is adjacent to the Northwick Road, Northwick Avenue, Salrunn Avenue, and Park Avenue, and within 50 yards of the trams, and the extent of the land would permit of the erection of 140 houses on the site.

At Dursley District Council meeting the chairman (Mr. S. Bloodworth, J.P.) stated that, owing to an unfortunate blunder, the property which it was decided to buy at the recent auction of Bristol Corporation estate was lost. The particular lot was wanted as a building site for an extension of workmen's dwellings, and, although the committee had resolved to offer considerably more than the figure reached, the property was knocked down to a private buyer, the clerk of the Council being under the impression that the bidding was for the Council.

Damage to the extent of between £30,000 and £40,000 was caused by a fire at the works belonging to the Consolidated Pneumatic Tool Co., Ltd., Fraserburgh, early on Friday morning. A large store, 200 feet by 50, was completely gutted, and the blacksmiths' shop and foundry consumed. Huge quantities of steel castings and stampings and saw material, also a 10-ton crane and seven air-compressing machines and a number of finished tools, were in the building. The Fire Brigade, assisted by sailors from the minesweepers in the harbour, rendered energetic assistance in preventing the blaze from extending to the main building.

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THE ARCHITECT
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The Reform of Architectural Competitions.

ALTHOUGH it is not the most important of post-war architectural problems, the reform of competitive methods is a pressing need and one which we hope will be effected. The small changes hitherto made may be likened to cleansing the outside of a cup whose inside is full of ravening wickedness. As we have urged, the number of competitions held should be drastically reduced, as the willingness of architects to compete for quite small commissions has placed them in a most undignified position, besides involving much waste of time which could have been better utilised.

Reform should take two directions : first, the reduction of the amount of work which competitors are asked to undertake, and secondly—and this is far more important—the assessor should be made absolutely responsible for his award, which should, in justice to those who compete, be liable to reversal by a competent professional court of appeal. Suggestions on the point have been hitherto met by the statement that such a course would be derogatory to the assessor's status, and would deprive him of authority; but seeing that every legal decision may be carried to a Court of Appeal if sufficient reasons exist, and that even the decisions of the Court of Appeal are liable to revision by a still higher body, the reasons advanced can hardly be said to be convincing. No body of men in this country occupy a more unquestionable position than His Majesty's judges, and it is largely because every imaginable safeguard exists to provide against the results of errors of judgment, which take place even among a body of men whose whole work is to administer the law of the land, which they have made their life-long study.

Most of the mistakes made in the adjudication of competitions arise from the average assessor's inability to view matters judicially. He is there not necessarily to select what he considers the best design, but that which most nearly approximates to certain binding conditions which are usually laid down. Here, too, he is in an easier position than a judge, for while a judge has to administer the law of the land which he may in some cases feel is inequitable, most assessors are able to set the conditions for the competitions they adjudicate upon, and should have less inclination to wish to set them aside than a judge who administers a faulty law. The assessor is wise if he reduces the number of binding conditions to a minimum, and he will also be prudent in refraining from making suggestions in his instructions to competitors. No man can really say, unless he has tried to plan a certain building, what are the best lines to go on, and the fact that a competitor frequently changes his views in the process of designing should prove to all of us how unwise it is to state *à priori* impressions in the instructions to competitors.

We would not allow a difference of opinion to form a reason for appeal, but only one of fact, and we believe that the Royal Institute might yearly select a small committee to deal with such appeals, and that if they decided that a breach of conditions had taken place the result of the competition should be declared null and void, and the President asked to nominate a new assessor to make an award. The fees to be paid to the assessor first appointed should in such cases be withheld and transferred to the second assessor. It may be urged that many men would not care to assess a competition on these conditions, but the obvious conclusion is that if this is so such men are probably unequal to the task, and their services are better dispensed with. To prevent the likelihood of frivolous objections being raised by competitors, the architect who appealed might be asked to pay a substantial fee, to be retained if the appeal were disallowed on examination.

We were at one time much in favour of the jury system as applied to competitions, but there is little evidence here to tend to show that it is in practice an improvement on the "one-man" system. An eminent architect has stated privately that the jury system tends to relieve an assessor from the sense of responsibility, and if it does away with this it destroys the most valuable of the assessor's assets. We want men who are not afraid of responsibility and who are willing to take it, and also who are not afraid of any criticism which may be made afterwards. We believe that if the reforms we have alluded to were carried into practice architects would be saved many heartburnings, and that the adoption of the principle of appeal would strengthen and not weaken the architect's position in the estimation of public bodies.

And we sincerely hope that the great amount of work which it is customary to ask men to undertake in competitions will in the future be drastically cut down. In the great majority of cases little more should be required than small scale sketch plans, with similar elevations and sections. A winning plan could frequently be shown in a few lines on the back of an envelope, and any competent assessor who had seen it would recognise it as being the best solution of the problem. What is needed is to obtain the right idea, and all elaboration of drawings and presentation of detail should be omitted as unnecessary.

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Illustrations.

ST. PETER'S, ROME.—(From an Old Engraving.)
DUBLIN HOUSING, FAIRBROTHER'S FIELDS AREA.

Notes and Comments.

Housing by Private Owners.

In an article entitled "Towards a Housing Problem," a writer in "Country Life" suggests that if a landowner who paid £350 before the war for a pair of cottages is faced by a cost of £550 if built in 1919 which might be reduced to £450 if he delayed building for five years, he should if enabled to build with the aid of a State loan of 90 per cent. only have to repay on the smaller total of £450, which would be the eventual value of his property. This suggestion seems to us to be both reasonable and equitable, if, as is alleged, the want of housing is acute. We cannot help feeling that there is an ulterior and unexpressed reason why so many politicians hastily assume that private enterprise is unable to do what it has always done in the past, while a second assumption is that for some unknown reason it is inexpedient to give the same monetary help to private owners which is to be almost forced upon public authorities. The taxpayer will recognise that housing is provided in either case, but in the one his liabilities are limited to a loan while in the other he becomes a partner in a speculation. It will be long before we hear the end of that most ridiculous argument, that because a proposed expenditure represents only so many days costs of the war, it should be lightly undertaken in peace times. The answer is that in the one case we had no alternative, in the other we have, and it is now time to endeavour to live within our means which have been lessened and not increased by four years of war.

An Effort of Contemporary Journalism.

We have not been used to regard the "Daily News" as a humorous paper, but a little paragraph which we give below tends to show that it is qualifying for a *rôle* in comedy:—

"It is the progressive architect who will study the standpoint of the practical housewife, and who realises the importance of cupboards, the convenience of wardrobes built into the walls, and the saving of labour when basins with hot and cold water supply are fitted in every bedroom. The fact that many women are now studying architecture will bring the remedy nearer."

We should like to give the writer of this paragraph just enough money to barely cover the cost of bricks and mortar, and to see whether his progressive views would enable him to provide the fixed washstands, hot and cold water services, and other items mentioned. But perhaps we ought to make allowances for our contemporary, whose views on international questions at the outbreak of the war were also more "progressive" than those held by others.

The Food of the Gods.

Under the title of "The Food of the Gods," Wells has written a most amusing scientific fiction narrating how a scientist discovered a food which so prodigiously stimulated animal and vegetable growth that living organisms feeding on it attained eight times their normal stature to the painful astonishment of some of the ordinary denizens of earth. Science has not yet done this, but a Mr. Fry has conducted a series of experiments on seed corn which, when subjected to a certain electrical process, is so stimulated that the resultant wheat is heavier, stronger, and more plentiful than that grown in the customary manner. The yield of the electrified seed is said to be from one to four sacks greater per acre, each sack containing four bushels. At the present price of 76*s*. a quarter, the electrification of his seed may give the farmer an advantage of 5*s*. 6*d*. per bushel in price, as well as an advantage of eight bushels per acre. On this basis the untreated wheat yields £17 2*s*. per acre, as against £33 for the electrified seed, if, as may be the case, the product is good enough to sell as seed corn which sells at 15*s*. a bushel, as against 9*s*. 6*d*., which is the price of milling wheat. The straw produced is also longer and stouter, which has the double advantage of selling for more, while the greater strength gives it more protection in case of storms and heavy winds. The result is produced by passing an electric current through wetted seed corn and then drying it afterwards. We should like to know whether the increased size and yield can be passed to a second generation without further electrification, and whether the seed of electrified corn if electrified will give a progressively greater growth. "Country Life" gives illustrations of these results in its last issue, and is doing a public service in directing public attention to a very useful discovery.

The Release of Architects.

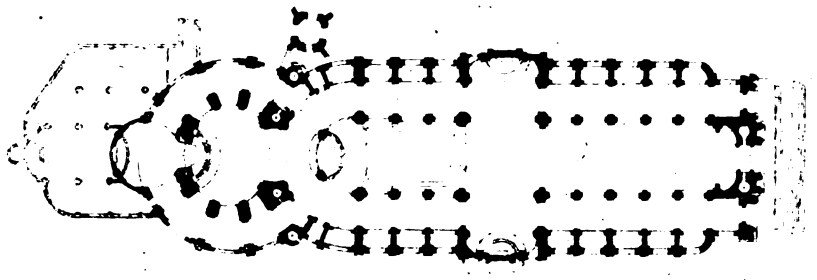
As there are arrears of building to be made up after four years of war, and as architects' services are urgently needed in connection with such work, we think that the military authorities should release them *en masse*. If in consequence of the manner in which they have given their services during the war this should mean making a gap in our defences, the breach might be filled from the ranks of the official bodies which need no longer be employed in making out and examining permits. The change of occupation would form a rest for the officials after their strenuous duties, and they would be better all round men when they returned from the army of occupation in Germany or from labour battalions in France, where their knowledge of the science of administration might be most useful to the community. It is, after all, hard that the officials who have done so much for the community should not have the advantage of a free sojourn on the Continent. We shall be glad of correspondence on this point.

War Restrictions Partially Withdrawn.

The Government are prepared to release, without special priority permits, stocks of non-ferrous metals so far as available for general industrial purposes. Applications should be made to the Controller of Non-Ferrous Materials Supply, Ministry of Munitions, Hotel Victoria, Northumberland Avenue. No permit is required for the manufacture or sale of iron and steel wire or wire ropes for home trade. The Government will continue to issue special priority permits for work of special national importance, and firms may still issue priority certificates where the order as to priority at March 8, 1917, allows them to do so. No application need be made to the Priority Department of the Ministry of Munitions unless it is desired to raise the priority of a contract on grounds of national importance. For this relief much thanks, but we think the authorities would save themselves trouble and please the public if they dispensed with priority and permits altogether. It is of the utmost national importance that the various checks on enterprise and commerce should be entirely removed, and we believe it passes the wit of man to decide wisely and well what is or is not of national importance, though we are sure that politicians of the old rank and file are not, though the truth may be a shock to them.

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PARIS IN 1808.





NO. 6.—CHURCH OF SAINT ROCH.

THIS church was erected in 1521 as a chapel dedicated to the five wounds of the Saviour. A great garden was laid out in connection with it in 1577. The church was commenced in 1653 from designs by J. Le Mercier. Robert de Cotte, and afterwards his son, were employed to design the principal front, commenced in 1736. The design executed is a good example of the Rococo type.

Some Notes from Ireland.

THE coming of peace has been the one topic of conversation for the past week. The news of the signing of the armistice was welcomed with feelings of profound relief and thankfulness for the ending of the war. The announcement in Dublin was for several days and evenings the occasion of great rejoicings, which unfortunately, on the second evening, degenerated into rowdyism on the part of the military, some of whom formed a mob and attacked the Mansion House and the headquarters of the Transport Union, smashing doors and windows with sticks and stones. This action was unaccountable, as the present Lord Mayor is highly respected for his moderation and outstanding abilities by all classes and creeds, and his Lordship's son, who holds the King's commission, went to the Front at an early stage of the war. The Dublin Transport Union, too, sent over 3,000 volunteers to the Front. During the celebrations the entire city was gaily beflagged.

No section of the community has greater reason to welcome the restoration of peace than the building and allied trades. During nearly four and a half years they have had to submit to all sorts of control and restraint of trade, not the least inconvenient of which was the competition of the State in securing the services of tradesmen and labourers in a greatly depleted labour market, at excessive rates of pay, which no builder could hope to give. The Government have built about six large aerodromes in the Dublin district.

Contracts during the past three years have been carried on in circumstances of peculiar difficulty. They have been limited to works in and about the destroyed area of Dublin, and repairs and alterations in the provinces. For the most part, firm contracts for building works became a thing of the past. Contracts where entered into were subject to the addition of a clause known as "The European Crisis Clause," or "pink slip," from a slip printed in red, which has of late years been attached to nearly all estimates given in the Dublin district. The clause read as follows:

"This tender is submitted on the express condition (which condition shall be embodied in any form of contract subsequently drawn up) that if the prices or cost of any material necessary for or essential to any part of this work advance or be reduced by more than 5 per cent. over or under the rates at this date current, the schedule of prices for such shall be correspondingly increased or reduced and the amount of contract amended accordingly.

"The following clauses to be embodied in the contract: If at the time of ordering the price or cost of any materials necessary for or essential to the completion of the contract, or ordered as an extra, shall have advanced more than 5 per cent. over the price or cost at the date of the tender, then the rates quoted by the contractor in the schedule of prices shall be increased by any excess over 5 per cent. On the other hand, if there shall be a fall in the cost or price of any such material of more than 5 per cent., then the rate or price quoted by the contractor in the schedule of prices shall be reduced by any fall in excess of 5 per cent., and the amount payable to the contractor shall be increased or reduced accordingly, and no other claim shall be made by the contractor on the building owner arising out of or in connection with such increase or reduction of price. The amount of increase to be paid by the employer or reduction to be allowed by the contractor shall be ascertained by the architect, and for the purpose of enabling him to decide as to the proper increase or reduction to be made in the contract price, the contractor shall furnish him with such orders, invoices, and receipted accounts or other information he may require. Should it be necessary the architect may refer to the records of the Record Committee for the purpose of assisting him in arriving at a decision."

The interpretation of the clause relating to increase of cost beyond 5 per cent. led to some misunderstanding, the wording being rather ambiguous. Some contractors contended that they were entitled to receive the full amount of any increase. Those who framed the clause, however, contended that its true construction meant that the first 5 per cent. of increase should in all cases fall upon the contractor. When the clause was framed at the beginning of the war it was not anticipated that there would be any scarcity of, or increase in, the cost of labour; in fact the general dread was unemployment and distress. The only contingency provided for was the increase in the price of materials. More recently the members of the Building Trades Federation included labour in the wording of the "pink slip" attached to their tenders. Some exception was taken to this, but it is obviously only fair that builders should be permitted to reasonably protect themselves against the utterly abnormal conditions brought about by the war.

Subject to these small differences, the clause has worked fairly well. The Record Committee comprised representatives of the builders, architects, and the Local Government Board, who recorded, in the form of per-

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centage increases, the rise in prices from day to day. It will doubtless be necessary to continue the present arrangements until affairs become more normal.

A number of works were carried out on the basis of "time and materials" plus a percentage for profit and supervision, this varying from 7½ to 15 per cent., the latter sum usually including establishment and other charges, the former subject to the addition of these incidental charges, which about equalised matters. A few other works were carried on by direct labour, the high cost of plant and scaffolding rather militating against this system.

We know of one ferro-concrete warehouse, quite empty, built within the past year under the time and materials system, which was finished for 4½*d.* per cubic foot, or about 25 per cent. over pre-war prices. Another building was an addition to an institution, value about £7,000, divided into many small rooms. The walls plain concrete, roof reinforced concrete and asphalte. This worked out at 1*s.* 3*d.* per cubic foot, or 30 to 40 per cent. over pre-war cases. This work was done by direct labour. Both these cases are favourable instances. More usually in the city of Dublin the cost was doubled and even trebled. The moral is that, granted favourable conditions and effective supervision, neither the profit and materials or the direct labour system are so exploded as some allege.

The volume of work during the past few months has, of course, been very small, but with the cessation of war a substantial amount of deferred private work may be looked forward to, most of it, however, on a very small scale.

The housing question is a burning one in Ireland, particularly in the city of Dublin, where the conditions are a disgrace to civilisation, and accountable for much unrest and acute discontent. Owing to the general absence of regular industries, the conditions of employment before the war were extremely bad, poorly paid casual labour predominating to an extraordinary extent, resulting in great poverty, ill-health, grossly excessive infantile mortality, and the lowest standard of comfort to be found in any civilised country. Owing to the large numbers of the working classes who enlisted in Dublin, these conditions have been temporarily alleviated to a certain extent by the separation allowances, but with demobilisation things will be worse than ever. The report on housing conditions in Dublin, a voluminous document, prepared by Dr. P. C. Conan, Chief Engineering Inspector of the Local Government Board, at the instance of the Government, discloses that to remedy the appalling state of affairs existing at least 16,500 new houses are absolutely necessary, as well as the acquisition and reconstruction of 3,800 old tenements at a total cost of £8,640,000. Whether the report of Dr. Conan will share the fate of so many others, or whether the State will give effect to it, in whole or in part, remains to be seen. The casual nature of so much of the unemployment prevailing—there are still, in spite of war conditions, some 50,000 men in Dublin earning only £1 a week—the want of industries and the general helplessness of so large a mass of the people, the total absence of private enterprise, and the vast extent of the problem, preclude the possibility of economic rents being fixed. It is, however, certain that unless something drastic is done on a large scale, and at once, discontent, very dangerous to the whole social fabric, will be bred, and a feeling of desperation produced. In fact, the whole Irish question is largely economic and industrial. It seems pretty certain, at all events, that building operations on some extensive scale must be undertaken.

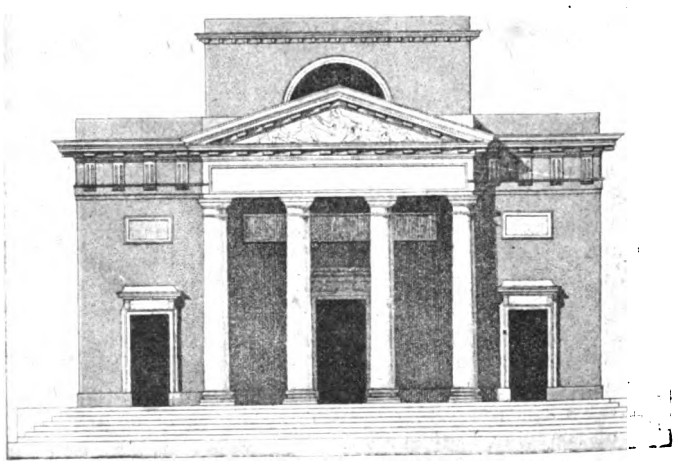
The question of Irish inland waterways, the development of coal mines, peat bogs, mineral resources, and water power, as well as the construction of harbours on the Atlantic Coast, have lately received renewed attention, but whether anything practical will ensue is also problematical. The war showed the enormous value to the Empire that a great Atlantic terminal harbour on the West Coast of Ireland would have had by shortening substantially the most dangerous part of the voyage from America. Blacksod Bay and Galway are rivals for the prize of possessing the port. The most serious submarine losses between England and America were sustained in rounding the northern or southern Irish coasts to get into the Channel or the Irish Sea.

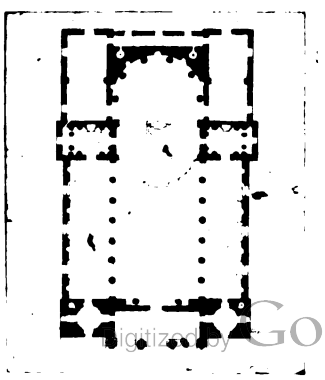
The time on sea, calculated on a 25-knot service, between London and New York viâ Liverpool is 129 hours, London to Halifax viâ Galway, 100½ hours. A great advantage is, moreover, that the sea voyage from Galway to Halifax is forty-one hours less than that from Liverpool to New York. A western Irish-Atlantic port would also afford an "all-red" route to Canada and the Far East.

In Belfast some extensive dockyard and electric lighting plant work, running into many hundreds of thousands of pounds, are contemplated, and here also there is great need for improvement in housing. The housing in every provincial town and village likewise calls for reconstruction on modern lines in conformity with the principles of town planning. The Dublin Municipal buildings, for which the designs of Messrs. McDonnell & Reid were placed first in competition, and for which tenders were invited just before the war, are likely to be proceeded with soon, as also the National University buildings in Merrion Square, for which the designs of Messrs. Keating & Clayton were selected. A new church, for which Mr. T. J. Cullen is architect, is to be built at Athlone at a cost of £50,000.

The destroyed portion of Sackville Street, Dublin, is beginning to assume the appearance of a new city. Owing to the war the progress has been slow, and only a few of the houses are fully completed, while some of the most important, including Messrs. Clery's and the Métropole Hotel, are not yet begun. The Munster and Leinster Bank and the Hibernian Bank premises at the corners of Lower Abbey Street are now well over the first floor level, and promise to have an imposing appearance, being entirely faced with granite and Portland stone. On the corresponding corners of Middle Abbey Street, Messrs. Manfield's premises are also over the first storey high in the beautiful white Stradbally limestone. They suggest what a fine effect might have been obtained had the whole new street been faced with this magnificent native stone. The buildings in which red-brick facing has been in part adopted have an incongruous appearance, owing to the hard character and colour of the large and ugly machine-made bricks used.

PARIS IN 1808.





NO. 7.—THE CHURCH OF SAINT-PHILIPPE DE ROULE.

THIS church was built between the years 1769-84 from designs of M. Chalgrin. It is planned on the lines of a basilica. The two aisles were terminated by chapels, one dedicated to the Virgin and the other to Saint-Philippe. They were originally designed to be carried up as two clock towers, but a wooden feature was substituted. The vaults were also carried out in wood.

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Picture Exhibitions.

THE LONDON GROUP.

We have had occasion to comment recently upon the absence from picture exhibitions of examples of the movements which stirred the art world in the years before the war. The exhibitions have as a rule been remarkably sedate, containing nothing likely to arouse controversy, or, we might also add, curiosity. They provided the spectator with good wholesome fare, omitting all eccentric dishes. The spectator has in consequence gone away satisfied but also perhaps a little disappointed. We therefore welcome the exhibition of the London Group which is being held at the Mansard Gallery at Messrs. Heal & Son's, in Tottenham Court Road. It makes us feel that the young bloods are still with us, that the spirit of the Indépendants, whose exhibitions used to brighten a spring visit to Paris, is still alive and animated. Not that the London Group represents any manifestations of the abandoned freedom, of the adventurous licence of the Paris exhibition; it is, on the contrary, marked by a quality of restraint, within the limits of its unconventional art. And it is an art we imagine that has a good deal to say for itself. The interest lies no doubt to a certain extent in its novelty; but it is deeper than the mere satisfaction of an appetite satiated by artistic conventions. If the London Group are at loggerheads with the established views of painting, if they are striving for a new and independent seeing and method of representation, they are certainly doing so within quite definite artistic limits, and if the result strikes many of us as odd, even ridiculous, the aim is respectable and the sincerity of the work beyond question. The chief feature of the exhibition, taking the collection as a whole, is the quality of design in the pictures, design as opposed to the realistic representations to which we are accustomed. The majority of the artists are disciples of the post Impressionist school. Mr. Nevinson's pictures, or panels, of the four seasons, although designed in the eccentric manner of the cubists are, notwithstanding their geometric quality, comprehensible, suggestive and decorative. Mr. Roger Fry's view of a village, although dull and rather formless at close view, gains wonderfully in effect, assumes shape and luminosity, at a distance. But as the necessary distance is beyond the space of a room of average size one is a little puzzled by the artist's aim. Mr. Nevinson, in his view of the Seine near Rouen departs from his geometric method, and presents a silver river, dotted with islets, running through a winding valley, with originality but with no touch of eccentricity. Mr. Adrian Allinson's landscapes of mountainous country are well constructed and depicted with a plastic vigour. Miss Ethel Sands contributes some studies in still life, in which she avoids the careful composition to which we are accustomed in such subjects, and gives us instead the bloom and freshness of flowers. Mr. Randolph Schwabe, Mlle. Thérèse Lessore and Mr. Fox Pitt have all sent interesting work. There are a few portraits at the exhibition, which with the exception of Mr. Meninsky's portrait of a boy, we refrained from more than glancing at. There are limits to the capacity of appreciation of even the most unbiased critics!

Fuel Economy.

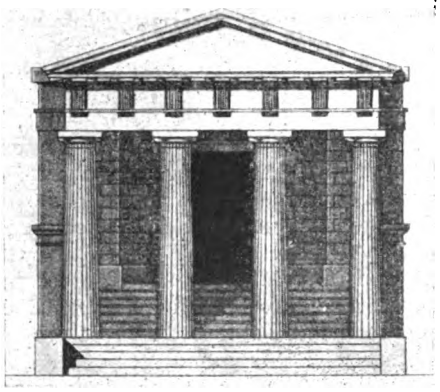
Mr. E. Herring, the President, was in the chair at a special meeting of the Institution of Heating and Ventilating Engineers, held on Tuesday, November 12, at the Holborn Restaurant, to discuss the question of fuel economy.

The President pointed out that the question of fuel economy was one of the most serious problems that had faced the country since the commencement of the war, and the problem was still serious in spite of the triumphant issue which had been obtained. He considered that its solution depended very largely upon those who used fuel in bulk, and also upon the co-operation of the general public, who, although they used less fuel than manufacturers, could still exercise a considerable influence in the direction of economy. For the last three or four years they had had to submit to economies in every direction, often leading to personal discomfort, and in the future they would so have to use things that no waste that could possibly be avoided should take place. There were three main directions in which they might consider the problem of fuel economy—first, in the selection of the most economical fuel to be used in any particular industry, having regard to the local conditions obtaining; second, the means to be employed to secure economical combustion and efficient results; and, third, the means by which the heat when generated could be conserved and its greatest value extracted before it was allowed to escape. It was an undoubted fact that they could heat rooms and still lose a great proportion of the heat unnecessarily. As an instance of that, he instanced the present-day craze for more ventilation than was really necessary in the interests of public health. The practice that maintained in schools especially, of keeping the windows open throughout the day, was he considered a very wasteful one, and was carried far beyond the real necessities of the case. He would like to see that Institution co-operate with the Coal Controller in appointing a committee which should make practical suggestions and recommendations for securing economy in coal consumption, and he thought that they might first centre their attention on the apparatus for heating as they existed at the present day. He thought that valuable suggestions might be made for improving existing appliances which would not involve workmanship or material to any extent. Such a committee might also consider the feasibility of designing heating or hot water supply boilers for the purpose of burning household refuse, and they might also consider the practicability of designing cooking stoves and ranges to be heated by coke. It might also be desirable to consider whether it was not possible to collaborate with architects for the erection of buildings of such materials and forms of construction as would best conserve the heat generated and prevent its escape into the outside air.

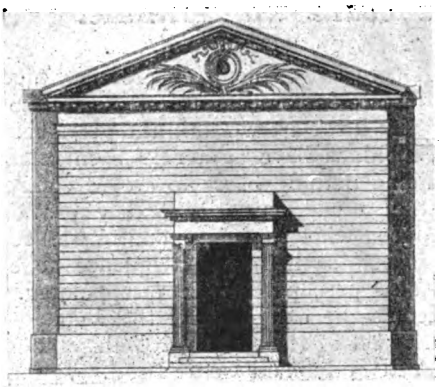
Mr. D. Wilson, technical adviser to the Coal Controller, detailed what his department had done in regard to fuel economy, and said that already in the electrical industry it had meant the saving of several millions of tons of coal annually. He considered that that Institution had a tremendous future before it in regard to economy in domestic heating, and the Coal Controller would welcome any help they could give him in the matter. No doubt the public hoped that now the war was over there would be an end of all controllers, and, speaking quite unofficially, he could not say what was going to happen in the future. So much, however, had already been done by his department that he thought it would be a pity if it was shut down—at all events he hoped its work would be continued in some way after the war.

In the discussion which followed, Mr. Frank Biggin gave it as his opinion that large economy might result from the adoption of central heating for dwellings in large towns, but this idea was combated by Mr. A. H. Barker, who said that he had carefully gone into the question on behalf of the Town Planning Institute, and he came to the conclusion that the cost of supplying 120 cottages from one centre was almost prohibitive. It would, be said, roughly speaking, add something like £20 a year to the rent of each cottage, and even without that drawback he doubted whether central heating would result in a net economy of fuel. Against this another speaker, Mr. Comyns Ching, stated that at the present time he was fitting up a central hot water supply for a small town planning scheme of workmen's dwellings where the houses were set out in blocks of about twenty. Each house, he said, contained three, four, or five rooms, and the heat would be generated by steam boilers and carried to the houses, and including the heat lost in the pipes he found that it would be possible to supply something like fifty gallons of hot water per day for each house at a temperature of about 140 degrees at a total cost of fuel of about 1*s.* 2*d.* or 1*s.* 3*d.* a week. That, he contended, was much cheaper than if each house provided its own heat in its own little cottage range with its uneconomical type of boiler.

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PARIS IN 1808.



NO. 8.—THE CHAPELLE BEAUJON, RUE DU FAUBOURG DU ROULE.

THIS little church was built by M. Beaujon, a Councillor of State and Receiver-General of Finance, and was erected as a chapel of ease for the parish of Saint-Philippe du Roule and also to contain his tomb. Girardin was the architect employed by M. Beaujon for this and for other works.

New Paths in Domestic Arrangements.

EVERYONE realises that the social changes caused by the war will react upon the internal mechanism of our houses. "The Servant Problem" alone will cause old arrangements that were showing signs of rust and decay to break down entirely, past all remedy by means of the frequent application of the oil-can. But there were many other causes of change, not only the negative falling off of one method but the positive discovery of new ways of doing things; and the enforced stagnation of house-building caused by the war has allowed them to group themselves together so as to form a solid body of domestic dogma in place of isolated beliefs, held here and there.

A useful manual of these new beliefs has been compiled by an engineer and his wife,* and it shows to what extent it is possible to perform by machinery what formerly required many pairs of menial hands. As might be expected, the bulk of the work is to be done by electricity: heating, cooking, ironing, and supplying the motive force for machinery. But the authors are by no means bigoted; they acknowledge that the British affection for the open coal fire has a sound, instinctive, scientific justification, and they hold no brief for the American method of heating by pipes solely. The ideal would seem to be that combination frequently adopted in the latest hospitals—of coal fires to furnish the radiant heat and radiators to warm the air by convection. Probably the most valuable asset of the coal fire in small houses is the inevitable ventilation which occurs when the fire is lit: we have seen many plans of small American houses lately with a single central stove, and while admiring the simplicity of planning, economy of running, &c., thereby obtained, we cannot help feeling that in cold weather with ventilation stopped up the rooms will become intolerably stuffy.

In the forefront of their book the authors place the fundamental question of insulation: it is no use devising new and simplified methods of heating if the fabric of the building allows the warmth to percolate through the walls. Particularly is this necessary if the old-fashioned thick walls, whose thickness performed this useful though scarcely appreciated function, are to be replaced by thin concrete slabs. They recommend that all external walls should have an internal lining of compressed cork, taking the place of the ordinary soft plaster. We think that there is a great deal to be said in favour of the more careful conservation of heat in many ways: how many hot water cylinders, for example, are enclosed in a non-conducting jacket? This is a question of economics which cannot be neglected to-day as it was before the war. But we can hardly think it a very practicable suggestion that all windows should be double. The already excessive cost of small houses would not stand such an addition, though of course the inner window need have no weather-preventive devices.

But it is disappointing to see what the authors regard as an ideal plan for a house: indeed, one regrets that the engineer and his wife had not had an architect son! No amount of ingenious contrivances for running a house will make up for a fundamentally bad plan, such as the one which is described as "approaching the ideal." It is the familiar speculative builder's type with a narrow dark passage past the stairs, and back and front living rooms only suitable to one type of aspect: no larder is shown and the coal is only accessible by walking out of doors. Even the ideal plan based on this is far from satisfactory: the chief feature is the workroom formed by knocking the kitchen and scullery into one and compressing the dining room. The fact that these are sketch plans may account for the too small windows, particularly to the workroom, which the authors say should be brilliantly lit: they also insist on a good larder, but do not show one!

It would be a good thing if in a later edition this section were revised and written by an architect, and a chapter might be added on the grouping of houses together and provision of combined services. It is to be feared that in the houses which are to be built at once there will not be much possibility of including many of these new ideas of machinery. It will be as much as can be expected if certain standards of size and planning are given: but a book like this should make us prepared, as soon as there is leisure, for a revolution in household arrangements which will gradually accomplish itself during the next ten years.

* "The Ideal Servant-saving House." By an Engineer and his Wife." (London and Edinburgh: W. & R. Chambers. 1918. Price 1s. 6d.)

As a war memorial for Wellington (Salop) it is proposed to demolish the four Council houses which now adjoin the free library and to erect on the site a suite of rooms to provide accommodation for a child welfare and maternity centre, social organisations, and other purposes. It is estimated that about £2,000 will be needed for the scheme.

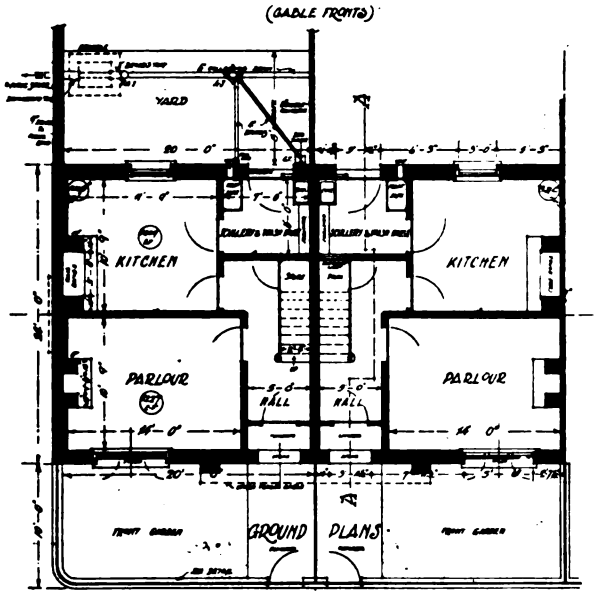
MR. W. RAINES, chairman of the Worksop Urban Council, presided over a meeting at Worksop to consider the question of a war memorial. A number of suggestions were made, these including the establishment of a Y.M.C.A. institute, the enlargement of the Victoria Hospital, the provision of cottages for maimed and infirm soldiers, cottages for mothers of the fallen and fatherless children, a recreation ground and outdoor gymnasium, a clock tower, a town hall in Bridge Place, and a memorial hall. The hospital scheme appeared to command most support, though the Rev. G. J. A. d'Arcy expressed the opinion that in a few years hospitals would be taken over by the State, and ultimately a decision was deferred to a future meeting.

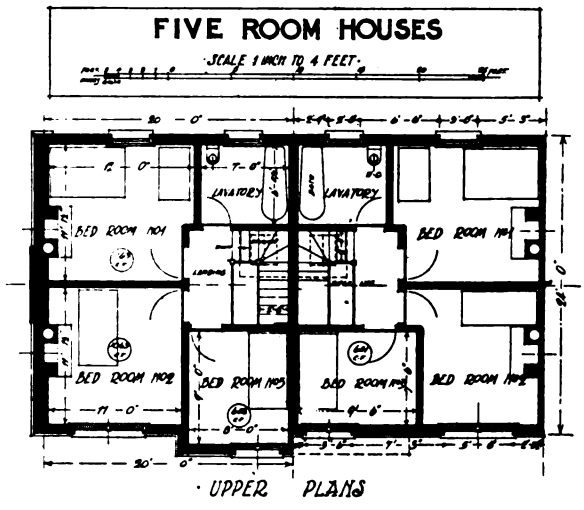
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Monthly Housing and Town Planning Review.









A Dublin Housing Scheme.

THE housing conditions of the working classes in Dublin have from time to time been the subject of much unfavourable comment, and deservedly so. The problem with which the municipal authorities in Dublin are confronted is, however, a peculiarly difficult one. Unlike the great English manufacturing cities, Dublin has few stable industries of any importance, with the result that an exceptionally large proportion of the working classes are dependent upon casual or uncertain employment. For reasons which it is not necessary to go into here, even if space permitted, the great majority of the working classes live in tenement houses. These houses are old, and have fallen into bad repair. Built originally for the wealthier classes, and designed, of course, for the accommodation of one family, they do not readily lend themselves to subdivision, and in almost every case the sanitary accommodation is, to say the least of it, entirely inadequate.

The departmental committee appointed by the Local Government Board for Ireland in the latter part of 1913 to inquire into the housing of the working classes in Dublin reported that the conditions of life in the tenement houses in the city were such that there was "urgent necessity for reform, which must have as its ultimate object the complete breaking up of the tenement system as it exists."

Long before this, however, the Corporation, keenly alive to the importance of the question, had grappled with it so far as the means at their disposal permitted, and prior to 1913 had provided nearly 1,400 self-contained dwellings. Since that date, in spite of the enormously increased difficulty of building owing to the continuance of the war, this number has been brought up to close on 2,000, and when the schemes now actually in progress are completed this number will be further increased by the addition of 260 self-contained houses.

Several other schemes of considerable magnitude are also in contemplation, and amongst them that known as the Fairbrother's Fields Housing Scheme, of which we publish several illustrations.

The area of this site is about twenty-two acres, of which six are reserved as an open space.

Although situated within the city boundary, it may be regarded as a semi-suburban site, and advantage has been taken of this fact in preparing the present plans to reduce the number of houses and to adopt a lay-out more nearly approaching the treatment recommended by the advocates of the garden suburb.

By-law roads in parallel lines with intersecting roads at right angles have been largely replaced by roads laid out in a more pleasing manner, and it is proposed to plant all the main roads with trees, while the houses themselves will be spaced out with a view to securing greater variety of effect.

The plan provides for a total of 370 dwellings, made up as follows:—85 five-roomed houses, 128 four-roomed houses, 157 three-roomed houses. All the houses will be two storeys in height, and will be provided with gardens front and rear.

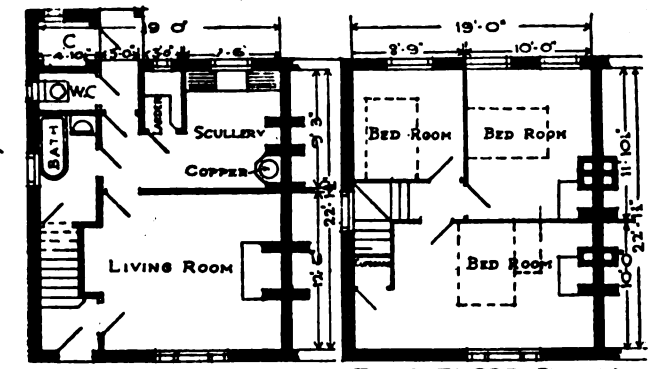
Tenders have already been received, and contracts will shortly be entered into for the erection of the buildings at a cost of £208,000, exclusive of roads, sewers, electric light, &c.

All the plans in connection with the scheme have been prepared by Mr. C. J. MacCarthy, city architect, and Mr. H. T. O'Rourke, assistant city architect.

AT Bangor Urban Council Mr. Robert Fegan suggested the formation of a comprehensive educational scheme and the provision of a suitable building at a cost of about £40,000 as a war memorial. The members approved of the general outline of the proposed memorial, and it was agreed to call a public meeting on an early date.

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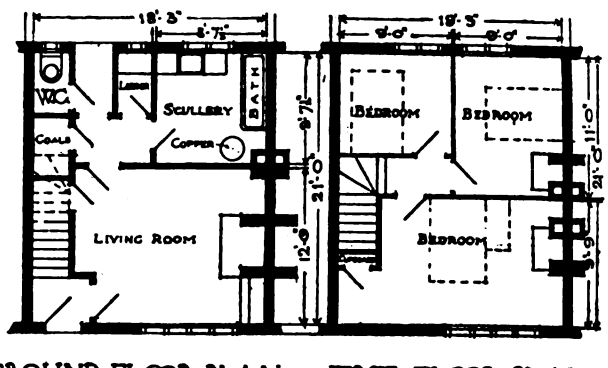
TYPE I.



GROUND FLOOR PLAN FIRST FLOOR PLAN

SCALE OF FEET

TYPE II.



GROUND FLOOR PLAN FIRST FLOOR PLAN

SCALE OF FEET

By Permission of the Controller, H.M. Stationery Office.

The Tudor Walters Report.*

THE Local Government Report on questions of Building Construction in connection with the provision of dwellings for the working classes in England, Wales, and Scotland which is commonly known as the Tudor Walters Report is one of the most important documents ever issued by a Government Department, and its 97 pages contain a great deal of very useful matter. The Committee consisted of Sir John Tudor Walters, M.P., Sir Charles Allom, Sir Frank Baines, Mr. James Boyton, M.P., Mr. William Fairley, M.Inst.C.E., Mr. G. Marlow Read, Mr. J. Walker Smith, M.Inst.C.E., Mr. James Squires, Mr. Raymond Unwin, and Sir Aston Webb, K.C., V.O., C.B., and Sir Tudor Walters acted as chairman, and Mr. E. Leonard, of the Local Government Board as secretary. Twenty-six meetings of the Committee took place, and 71 witnesses were examined. Besides this, 39 sub-committees were held, at which informal evidence was given by 78 witnesses.

We are surprised at one omission from a Report which is otherwise so comprehensive—the omission of adequate consideration of actual and possible new methods of heating and construction which may, we believe, largely revolutionise the problem of housing before many years are past, and we are also surprised that due weight does not seem to have been given to the question of the provision of a good class of temporary housing—temporary in the meaning of being sufficient for a duration of fifteen to twenty years. It is to our mind a very open point whether we can regard the industrial conditions which may obtain within the next two decades as so fixed as to render it advisable in many cases to erect what are called permanent buildings in certain localities now, and we are quite sure that the future developments of heating, water supply and other domestic services will be largely affected by changes within a comparatively short time. We also believe that it is most difficult to forecast at present the extent to which emigration may affect the problem of housing, nor is it at all easy to determine what the future location of our industries will be. Had the housing of the future to be provided as that of the past has almost wholly been, by private enterprise, these questions, important as they are, would be relatively immaterial, since the loss of any unwise steps would have fallen on individuals. Now, however, that it is proposed that great housing schemes should be undertaken by municipalities out of money advanced by the Government, and paid for out of the rates—both equally provided by the taxpayer—these questions are urgent and important, since money unwisely expended is an addition to the great burden of our national debt at a time when the country has to bear an unprecedented weight of taxation tending to check and burden the commercial enterprise so important for the prosperity of the country. We will confine ourselves to commenting on the Summary of Conclusions and Recommendations, as space renders anything else impossible. Generally the Report is an able one, as far as it goes, but, as explained, we do not think it goes far enough, and are afraid that temporary political issues have been allowed undue weight when what is really required is a more scientific and judicial treatment of the problem.

By-laws.—All will agree that local acts and by-laws in many cases increase the cost of building, and that rigid by-laws are undesirable. It is suggested during the emergency period that the Local Government Board should have powers to exempt any housing scheme approved from the operation of local by-laws considered unnecessary, and also that the procedure under the Housing and Town Planning Act should be amended.

Sites should be selected with due regard to the future development of a town or district, and its accessibility to industrial, educational or social centres, and also means of transit. Attention should be given to the configuration of the site for economical development, and the provision of inexpensive foundations. Rural houses should wherever possible be built in villages or groups.

Lay Out and Development.—The necessity for a careful lay out, and the consideration of contours is emphasised. A maximum of twelve houses to an acre is recommended, and where, for special reasons, it is necessary to exceed this, the greater local density should be equalised by the provision of adequate open spaces.

A distance of 70 feet between facing houses should be adopted as a minimum. Easy gradients should be provided to thoroughfares. Minor roads should be planned to obtain the best building frontages, and so as to operate through traffic. The waste of frontages at road junctions should be avoided. Enclosed back yards should be avoided, the garden should be open to view from the house. Houses should not be placed on northern slopes.

Footways and Carriageways.—A width of 8 feet will serve as a general footpath for a group of houses, serving as an occasional carriage way; a 13 feet way will serve for two vehicles to pass slowly, and is suitable for short roads; 16 feet is suitable for minor residential roads of considerable length. With all these widths turning ways should be provided every 150 yards. Adequate distances between houses should be provided otherwise than by the width of the roads.

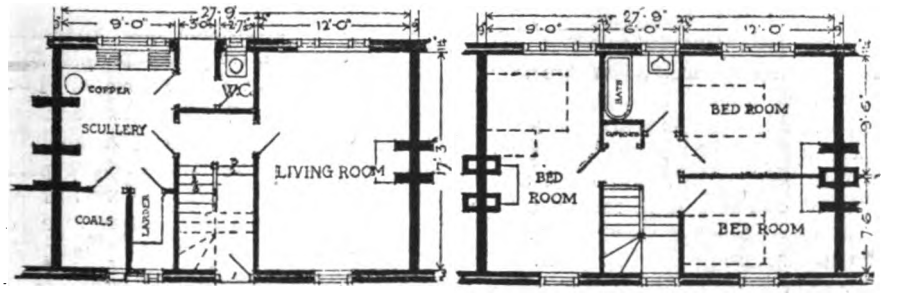
The cost of minor roads can be reduced by diminishing width of the carriageways and paved surfaces, by suitable construction, the use of clinkers from refuse destructors, and omission of kerbing and channelling.

Drainage.—The system of the common drain or sectional drainage should be adopted, one connection with the sewer to serve for 14 dwellings, one trap and system of ventilation for each section. Manholes at junctions of common drains, elsewhere inspection chambers in their place. Connections to be brought into soil drain as near to dwelling as possible to save cost.

* Local Government Boards for England and Wales and Scotland. Report of the Committee on questions of Building Construction in connection with the provision of Dwellings for th Working Classes. Cd. 9191. (H.M. Stationery Office. 1s.)

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TYPE III.



GROUND FLOOR PLAN FIRST FLOOR PLAN

SCALE OF FEET

By Permission of the Controller, H.M. Stationery Office.

Fencing.—Cost should be reduced to a minimum; hedges should be planted, and pending their growth concrete boundary posts with wire or wire netting between used.

Accommodation and Economy.—The self-contained two-storey cottage should generally be adopted. No economy in the construction of tenements or double-flatted houses. Wherever possible a parlour should be provided in addition to living room, scullery and bedrooms; parlour should not be provided at the expense of living room or scullery. The most serious shortage is that of houses with three bedrooms. Houses of various types should be included in a scheme. Hostels for single workers should be considered as an alternative to their accommodation as lodgers in dwelling houses.

Parlour should have an area of not less than 120 feet with direct access from entrance lobby, door should not open across a window or fire.

Living Room should have a south-east aspect, and an area of not less than 180 feet, fireplace at right angles to window, doors at opposite end of room. In *Type* 1, where cooking is to be done in living room, range should be suitably placed for light, a door opening directly into scullery, and room for a table other than that used for cooking. In *Type* 2, where cooking is mainly done in scullery, and a combined cooking range and sitting-room grate is fitted in the living room, the door should open directly into scullery. In *Type* 3, where all the cooking is done in scullery, access to the scullery from living room may be through the entrance lobby. In rural districts cooking ranges should be placed in living rooms.

Scullery should be planned as a domestic work room, not as a living room. Adequate space to be given for all its uses, which, rather than the area of 80 feet, should determine its size. Space should be provided for sink, and in Scotland a second sink or tub, washing copper, gas cooker where gas is available. In *Type* 2 a simple grate for drying clothes, in *Type* 3 a cooking range to supplement gas cooker. Where gas is not available, a grate for drying clothes, and in some districts a bread oven. Ample space for shelving and cupboards for utensils and standing space for mangle, wringer, and other utensils. A back lobby is desirable.

Wash House.—Generally the provision of a wash house is not economical, but the bath and washing department may be provided in a chamber off the scullery.

Baths should be in a separate compartment. Where there is no parlour the bath room should be planned on the ground floor, where there is sufficient space without cramping the bedrooms on the first floor. Minimum width of bath room 4 feet 3 inches, but if possible not less than 5 feet.

W.C. should be made accessible under cover from back lobby or porch; undesirable to place it in bath room; economy in plumbing to be considered.

Larder should be north or east, and entered from scullery. In urban districts its area should be 12 to 16 square feet; in country districts not less than 18 feet, and in some cases 40 to 50 feet is desirable.

Coal Store should be large enough to hold one ton of coal and some firewood, accessible where possible under cover, door opening from back lobby in preference to scullery; minimum size 15 feet.

Staircases.—Stairs should be 3 feet wide, and 6 feet should be regarded as the minimum width for a staircase returning on itself; steps should have 7½ inches rise, 9 inch treads. Winders to be avoided; where used there should be a wall handrail.

Bedrooms.—Of the three bedrooms one should have a minimum floor area of 150 feet, the second 100 feet, the third 65 feet. Larger rooms are desirable. The first two rooms should have fireplaces, the third efficient ventilation. Bedrooms should have cupboards.

Rural Cottages should have greater larder, storage and fuel accommodation than urban houses, and in certain districts a pig-sty should be provided.

Economy in Planning and Design.—Back projections generally to be avoided, and simple rectangular forms adopted. Coal store and other adjuncts should be included in main walls. Flues should be grouped together whenever practicable. Frontage length should not be unduly economised to save road making. Good exterior design, and the use of local materials should be aimed at. Simple roof lines to avoid cutting, and dormers to be adopted. When concrete construction is adopted and flat roofs used they should be so used over definite areas.

Conversion of Existing Buildings.—In England and Wales the conversion of large houses into working class flats is likely to be successful to a limited extent, the conditions in parts of Scotland may also be similarly suitable. The renovation and remodelling of existing middle-class houses should be considered. The conversion of houses into hostels might be suitable in some districts and in rural areas it may be found economical to reconstruct cottages.

Communal Services.—The supply of hot water from a central station is very desirable. Central washing establishments are desirable.

Economy of Construction.—Standardisation of type plans to serve for purposes of comparison, a few standard figures for widths of roof trusses, sizes of chief rooms and width and proportion of stairs might be fixed. Standard sizes for windows, window panes, doors are desirable, and might render the adoption of ferro concrete or steel frames practicable. A limited number of patterns of ranges, grates, baths, sinks, and other fittings should be adopted.

Foundations.—Where a concrete base of sufficient width is adopted footings might be dispensed with. A rigid concrete foundation should be adopted where concrete and other slabs are used in upper walls. Local flat bedded stones may in some cases be used as a foundation, and in mining areas a reinforced concrete foundation may be found both useful and economical.

Walls.—Local experience should be utilised. In view of the shortage of bricks care should be taken that inferior bricks are not used externally. In the case of hollow walls an impervious outer surface must be used. *Hollow walls* must be constructed so that the two parts are tied together with vitrified brick or metal ties. The cavity must be taken two or three courses under level of damp course. Lintels must be protected from the accumulation of moisture in cavity. The cavity must

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be stopped in joints with slate in cement, vitrified tiles or other impervious material. The cavity must be protected from vermin and sufficiently ventilated.

Concrete.—Where bricks are plentiful there is not likely to be much saving in using concrete. Where this is not the case, and a suitable aggregate is present, it may be usefully employed, chief dangers arising from imperfect gradation of materials. Concrete slabs should be allowed to mature before being used. Simplest and most reliable method of using concrete is in the form of slabs, in hollow walls, the outside being weather proof, the inner absorbent so as to discourage condensation.

Substitutes for Timber.—On ground floor by solid concrete, on upper floors hollow brick blocks which can be used without shattering or centreing. Experiment in covering floor materials is desirable. Flat roofs finished in concrete without asphalt are seldom waterproof; if so covered no saving is effected. Reinforced concrete roof members, reinforced concrete window frames, and concrete or plaster slabs for internal partitions may be used with advantage; also concrete stairs.

Slater and Tiler.—For pitched roofs materials other than slates or tiles are not recommended.

Carpenter and Joiner.—Special precautions will be necessary to provide against the use of unseasoned wood. Greater consideration for market sizes, and more scientific use of timber recommended.

Ironmongery.—Certain patterns should be standardised, and the best means of rust-proofing adopted.

Plasterer and Rough-Caster.—A plaster is desirable which, while stronger than the ordinary, is not as likely to promote condensation or convey sound as many patent plasters are. Plaster slabs may be used to save time.

Smith and Founder.—A minimum thickness of 3-16 inch for rain water goods, greater use of rust-proofing processes. A few patterns of ranges and grates should be standardised.

Electrician, Plumber and Painter.—Expensive and elaborate wiring systems not necessary for cottage use. No satisfactory substitute for lead in plumbing. Economy would result from the greater use of galvanized pipes for lead; greater care in the protection of pipes and fittings from frost would result in economy, and the adoption of standardised traps, &c., is recommended.

Painting deserves greater care than has been given to it to secure the best materials for certain situations.

Supply of Materials and Labour.—There is urgent need for the building of 500,000 houses to make up arrears; a systematic survey is recommended to judge of the urgency in different districts. It will require 421,200 men to build 300,000 houses in one year.

Organisation.—Considering the uncertainty of prices and supply of material the contractor should be relieved of risks outside his control. The State might with advantage facilitate arrangements for the supply of the chief materials and standardised fittings at fixed rates. Every housing scheme submitted to the Local Government Board should be prepared by a competent architect.

We have given above the summarised points of the Summary of the Report. As has been stated there appears to be reason to believe that the whole question is being rushed for ends which are largely political, and we do not think essential and important factors have received due and adequate consideration. The readjustment of our laws of rating and the repeal of the Finance Act have a direct and most important bearing on the provision of housing. The Report is an able and exhaustive one within the limitations set up, but we can see no reason or justification for giving State-aided housing precedence over other forms of building required by the business community and by private individuals who can provide work for the building trades which will not be paid for out of public money.

EXTENSIVE alterations are to be made to All Saints' Church, Derby, which has been chosen as the Cathedral for the new diocese of Derbyshire.

The Rebuilding of Salonika.*

DURING these strenuous and anxious times there are probably comparatively few people who have given any serious thought to the future of Macedonia and the intensely interesting problems connected with the rebuilding of the important port and financial centre of Salonika, and yet I claim that no part of the territory over which such terrible warfare has been waged during the last four years would better repay our careful study and active interest, for to every student of the Orient it is becoming increasingly clear that Greece is now entering upon a great renascence epoch.

As Allies whose affections have ever been towards Greece, we wish to exercise whatever beneficent influence we are capable of, and for this work our Army has magnificently prepared the way.

The great popularity of our Army, a popularity which applies to all ranks, from the Commander-in-Chief, General Sir George Milne, to the private soldier, and also to the Navy, is almost unbelievable, until one hears from the residents of their splendid heroism and self-sacrifice during the terrible night of the fire. Nothing has ever happened in Macedonia which so impressed the Oriental mind, or which has endeared our men so completely to the inhabitants of Salonika and the hinterland. Stories are told on every hand of their perfect genius for controlling panic-stricken people on a great and tragic occasion, and their care of the women and children who flocked to them as their natural protectors is now a household word. On all sides I heard the expression, "British soldiers are inimitable."

In this great work of reconstruction we have already made a good start by the creation of a great system of splendid railways and main roads, which radiate from the city through the hinterland to the frontier, and which have opened up the country for future development and assured prosperity. In carrying out this work vast numbers of the mixed population have been employed, and their work has been paid for on a scale which is just and even generous. In fact in all these matters the British have won a reputation for fair dealing and prompt payment.

Another reason which contributes to our influence in Macedonia is the knowledge that we are held in high regard by the young King and by M. Venezelos and his Government.

Seeing we are a nation which relies so much on our overseas trade, it seems to me that people at home should make haste to realise the commercial importance of Greece, and to take every advantage of the present favourable conditions to further cement those Anglo-Hellenic bonds of interest and affection for which your Society was founded.

The replanning of the city after one of the greatest and most disastrous fires in history provides just the right opportunity, and an occasion for enterprise in the creation of goodwill and commerce.

As a pioneer in the now well-recognised art and science of city planning, I regard it as most fortunate that an Englishman was asked by M. Venezelos to take the senior position on the city planning commission for rebuilding Salonika and to lay down the principles upon which the plans were to be developed, for nothing appeals to the Oriental mind so much as the building of a city. With them city building is the highest of all possible enterprise, and I may add that the citizens of Salonika and Greece generally are delighted that we British were asked to take so important a part in this work.

Quite apart from the necessities created by the great fire, the rebuilding of Salonika is quite a logical proposition, because it will pay to rebuild the city on economic and æsthetically beautiful lines, and this can only be assured if whole sections are built to a well co-ordinated

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* A lecture delivered before the Anglo-Hellenic Association at King's College, London, by Thomas H. Mawson, Senior Member of the Commission for the Rebuilding of the City.

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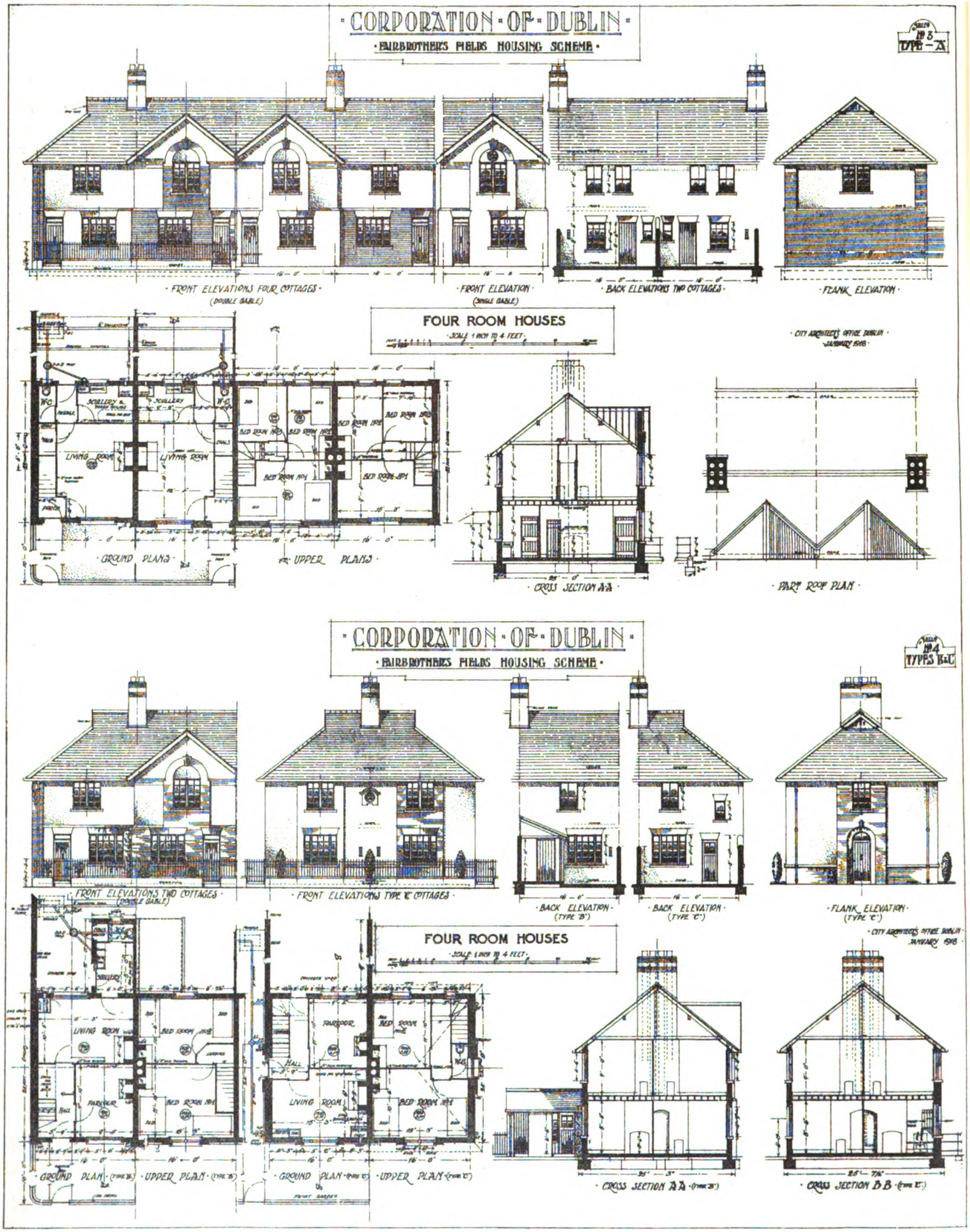


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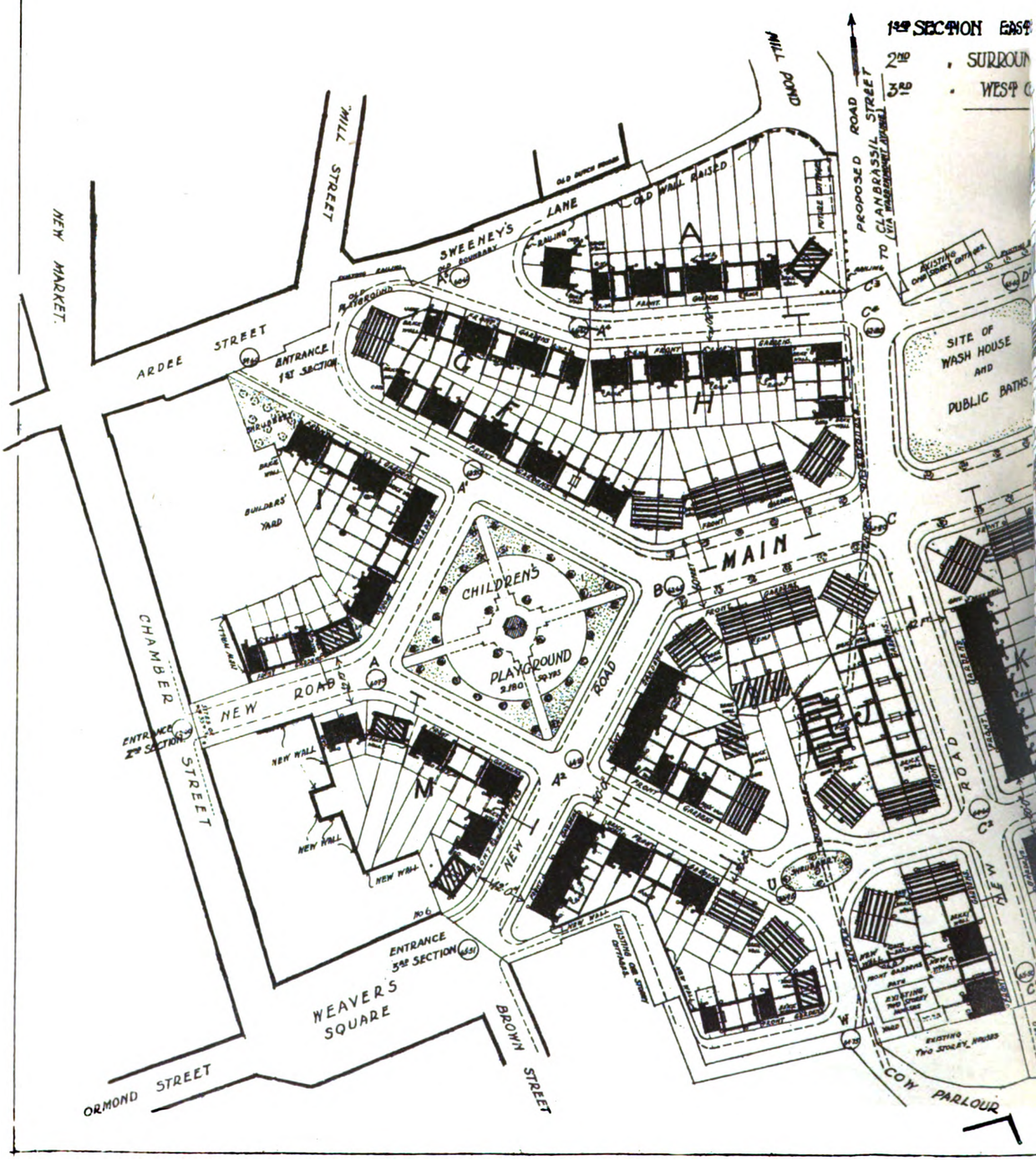
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CORPORATION OF DUBLIN

FAIRBROTHERS FIELDS AREA · HOUSING SCHEME

AMENDED PLAN

SCALE OF FEET



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Nov. 29th 1918.

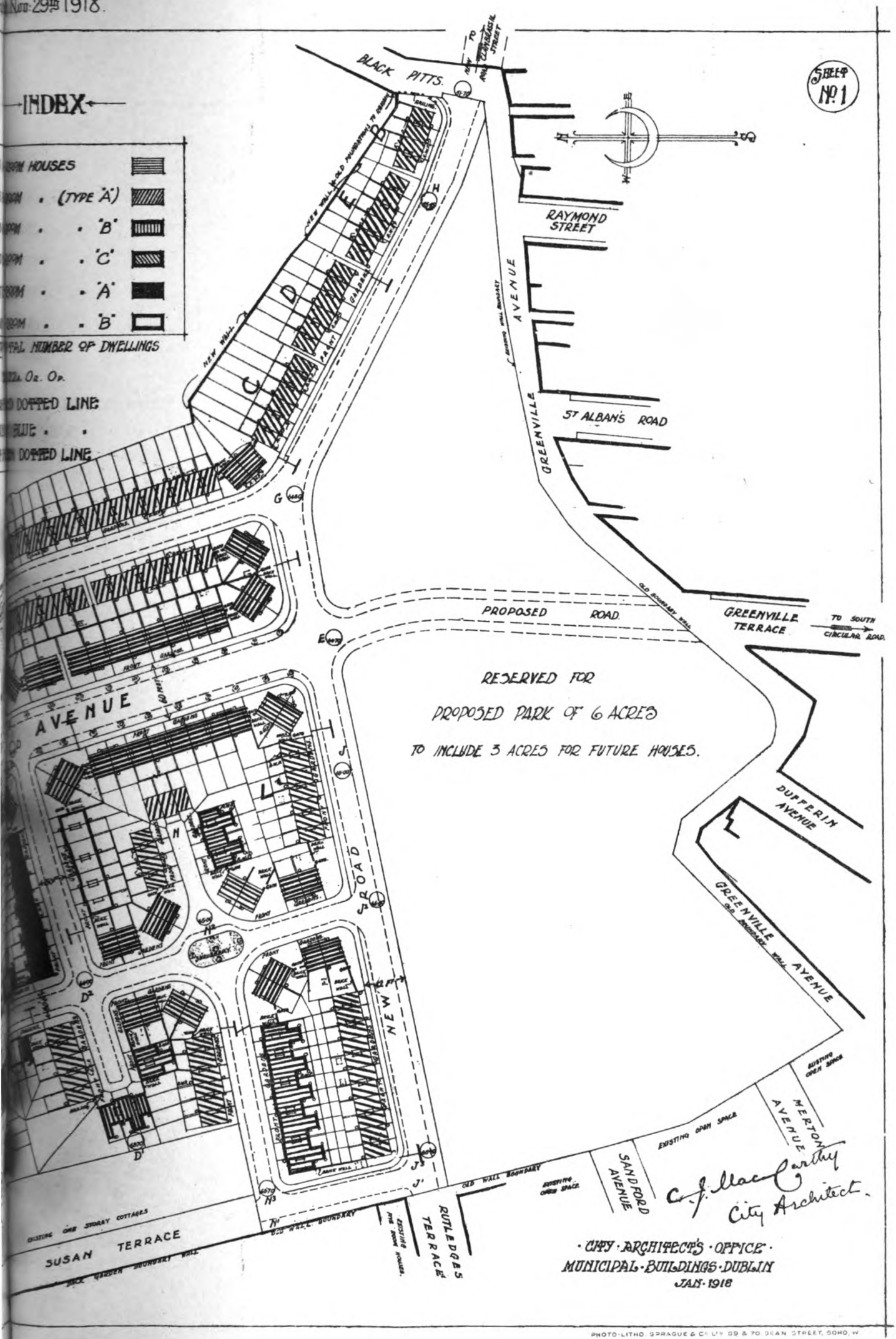


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All'Altezza Reale Eminentissima di Errigo Benedetto Maria Vescovo di Frascati
ed Arciprete della Sagrosanta
Il Prospetto principale del Tempio e Piazza di S. Pietro
L'Umilissimo Devotissimo Obbligatissimo Servo Giuseppe Vasi Conte Palatino

1 Anfiteatro ornato con 320 colonne di pietra Travertino 2 Fontana di acqua perenne 3 Obelisco di granito rosso da Cajo Cesare portato dall'Egitto a Roma e inalzato nel suo Circo alto palmi 84 e con Piedistallo Croce e Palla di bronzo

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29th 1918.



Cardinal Duca d'Yorck Vice-Cancelliere della S. Rom.na Chiesa, Sotto Decano del Sagro Collegio
Basilica Vaticana &c. &c.
in Vaticano, e Palazzo Pontificio, Presenta, e Dedica
Cavaliere dell'Aula Lateranense, dal medesimo disegnato ed inciso l'anno 1774.

Ch. di S. Salvatore in Campo S.te 6. Seminarij del Clero di S. Pietro. Palazzo per i Canonici della Basilica. e Sagrestia di S. Pietro 9 Ch. di S. Maria in Palati Pontif.e in Cortile di Belvedere in Torre dell'antiche mura della Città Leonina 15 di Vaticano.

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CORPORATION OF DUBLIN

FAIRBROTHERS FIELDS · HOUSING SCHEME ·

PLATE No. 5
TYPE — A



· FRONT ELEVATIONS FOUR COTTAGES ·
(DOUBLE GABLE)



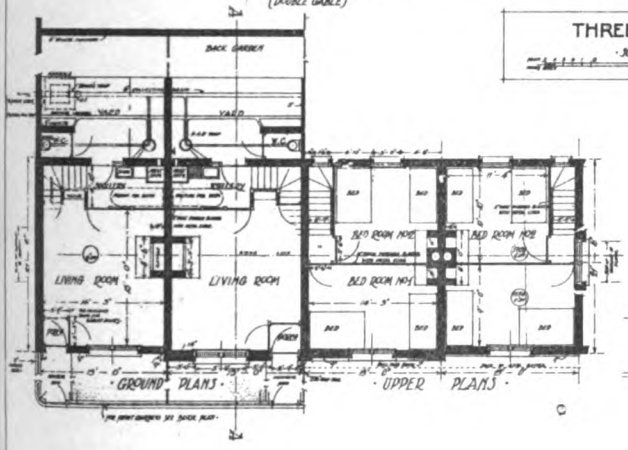
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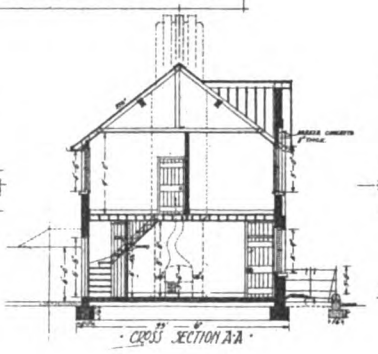
· FLANK ELEVATION ·

THREE ROOM HOUSES

· SCALE 1 INCH TO 4 FEET ·

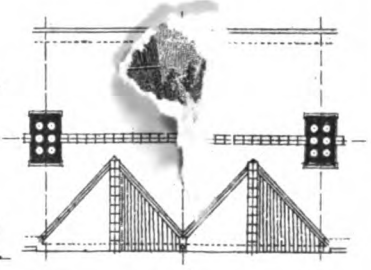


· GROUND PLANS · · UPPER PLANS ·



· CROSS SECTION A-A ·

· CITY ARCHITECT'S OFFICE DUBLIN ·
· JANUARY 1918 ·



· PART ROOF PLAN ·

CORPORATION OF DUBLIN

· FAIRBROTHERS FIELDS · HOUSING SCHEME ·

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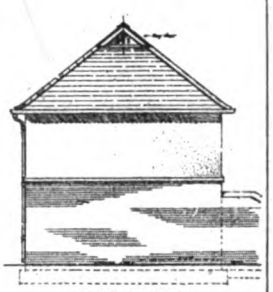
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· FRONT ELEVATION ·
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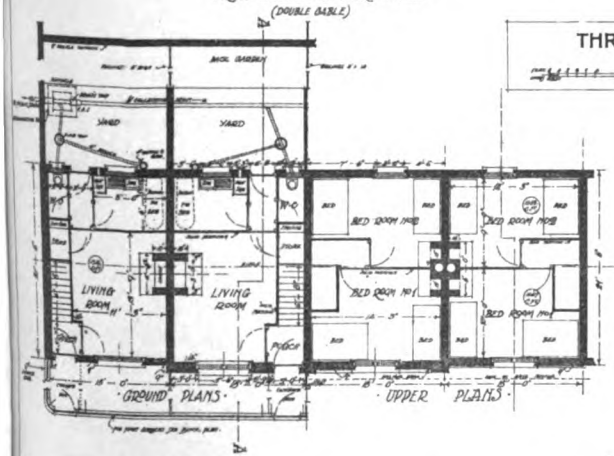
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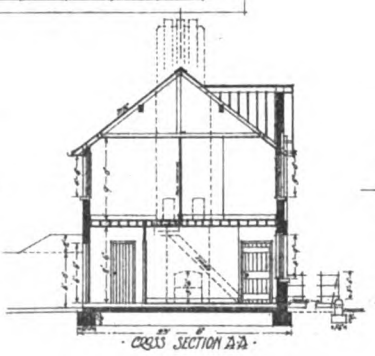
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THREE ROOM HOUSES

· SCALE 1 INCH TO 4 FEET ·

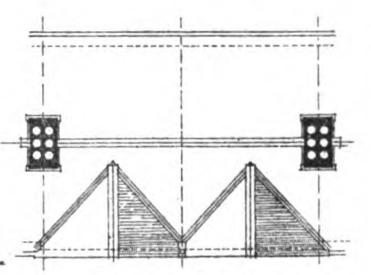


· GROUND PLANS · · UPPER PLANS ·



· CROSS SECTION A-A ·

· CITY ARCHITECT'S OFFICE DUBLIN ·
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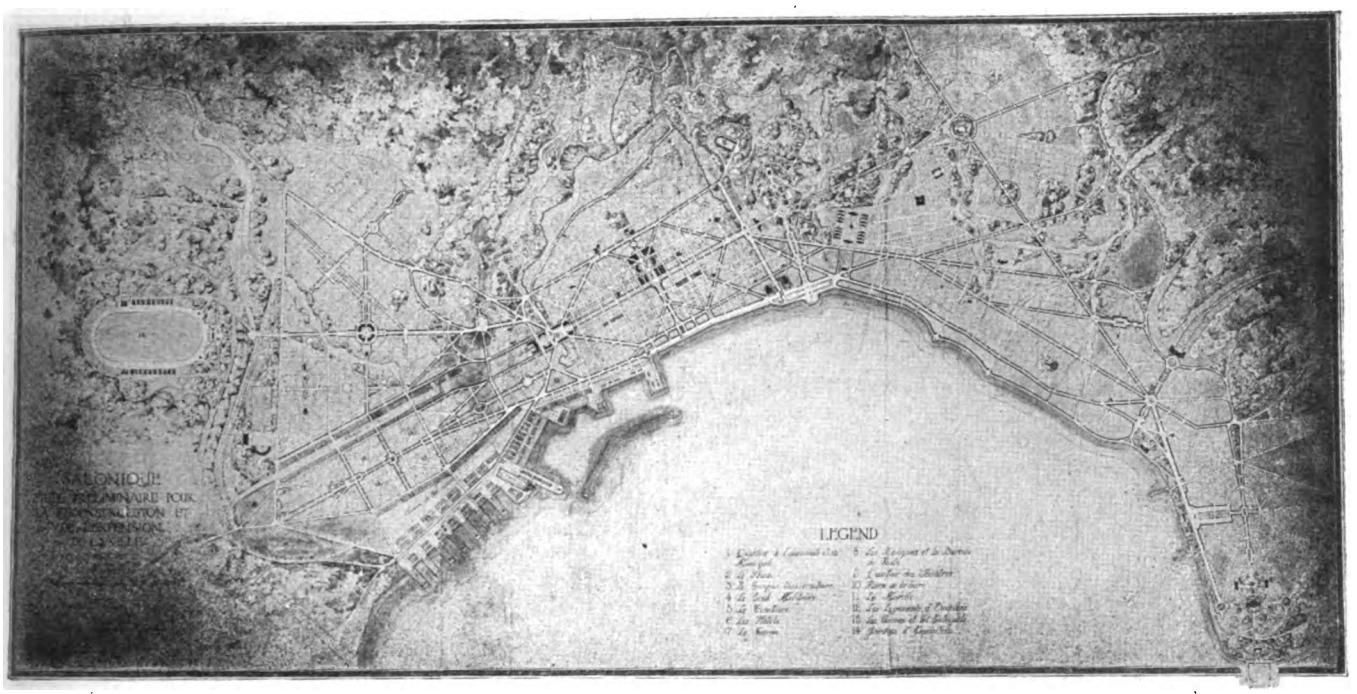


· PART ROOF PLAN ·

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and connected plan. This means a properly devised plan of the whole city.

As rebuilt, the new Salonika will become one of the most important cities in the Orient, and express in its architecture the qualities of permanence and stability which should characterise every great city. There is every reason for this, because Salonika is more than the chief city of Macedonia; it is the natural gateway to the Balkan States. Indeed it is said that at the end of the war Serbia will ask for, and probably obtain, a free port near the city. All these factors will ensure a rapid growth in the population, which at the present time is two hundred and twenty thousand, but which in twenty years may be over half a million.

What of the climate of Macedonia and Salonika as a place of residence? As to the climate, this is perfectly delightful for eight months in the year, but during the remaining four months malaria is prevalent, but with the drainage and proper irrigation of the Vardar, Mickra, Langaza, Struma and Dorian marshes this scourge should rapidly disappear. Indeed conditions in this respect are already greatly improved. During its good seasons Salonika will surely attract many visitors and tourists, for it will be one of the most beautiful seaports in the world, a city in which parks, gardens and boulevards will provide ample shade and recreational spaces, a city in which intellectual pursuits will become a pastime, and in which opera and good music will flourish. To the historian and artist the city will possess great attractions, for every archæological treasure will be preserved and in it the new architecture, though following local tradition, will equal in design and beauty the best modern work in any European city. So much M. Venezelos is determined we shall realise. In the business and residential quarters there will be good and well conducted schools, and a well-placed and well-equipped University, a great opera and theatre, a permanent exhibition ground, and a unique sporting arena, a yachting centre at Mikra Point, now the site of our British base hospitals.

From a strategic point of view Salonika will have good railway connections with the Balkan States and Western Europe, with Constantinople and Athens, the latter railway (which is just completed) adding greatly to the convenience and popularity of Salonika, giving to it the importance of a centre.

Even now, in one respect at least, Salonika is already unique, for it has no municipal debts, and does not need to levy a rate for maintenance.

To those who have visited this ancient port and who, therefore, do not need to follow the slides very closely, the following notes on the replanning of Salonika by the Commission may be of interest.

The ancient thoroughfare, Rue Egnatius, will be the main central longitudinal boulevard intersecting the city. It will be straight from end to end, having a width of one hundred and twenty feet. At the Porte Varda end will be placed the great union terminal railway station, with an electric underground railway connecting the stations with another railway terminal at Kalanaria, or the east end of the city. From this station a new railway will eventually run to the Gulf of Orphano. The width of Rue Egnatius permits of a central boulevard of trees with tram lines on either side, then two lines of vehicular traffic, and wide tree-planted sidewalks. Above and below this main axis there will be three other longitudinal axes, or seven in all, two of these including Rue St. Demetre and the Quay. Therefore the flow of traffic from east to west is well provided for.

The main cross axis starts at the Quay and extends to the minaret of St. Demetre; this is the main cross artery of the city and will be 150 feet in width, and be planted with four lines of shade trees, and have, in addition, a central parkway. On either side of this boulevard, and north of Rue Egnatia, there will be erected in large open spaces the new City Hall and Law Courts, which, together with the new St. Demetre as a terminal feature, should make a very fine architectural composition.

Rue Venezelos, so well known to British soldiers and nurses, will be widened and paralleled by another road of equal width and importance to the west. At the base of these two roads, near its junction with the Quay, the central block between these two parallels is carried back, thus forming a square, to be called Liberty Square. Here will be erected the great Post Office and some of the principal banks. Many other cross arteries are planned, and these and the longitudinal roads are intersected by great radial roads, thus ensuring the free flow of traffic in all directions.

The great Quay is to be widened by about 40 feet, and divided into lower and upper boulevards, the latter about four feet above its present level, and from this quay all shipping will eventually be banished. The docks are to be developed westwards, and the White Tower district developed as the great social centre for the city. Here will be built the new opera house and theatre, and the great city cafés.

The east or Kalanaria end of the city will become increasingly the residential quarters for the official, professional and merchant class, and Mikra Point, the chief residential area and the seaside resort for the citizens of Salonika. Here also will be developed the bathing and recreational centre, with a great yacht club as part of the scheme.

Within the central part of the city there will be many

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beautiful town gardens. One of these will extend from the Cathedral of St. Sophia to Rue Venezelos, and forward to the proposed French Cathedral at the end of Rue France.

One great feature of the city will be the new Bazaars which are to follow the best tradition of Byzantine architecture, and planned in large groups in a system which will prove a great convenience both to sellers and buyers. This work is in the hands of my French colleague, M. Hebrard.

After so terrible a disaster as the great fire it will not surprise my readers to hear that "Fire Control" has received most careful consideration. To begin with, the park belt, which extends from sea to sea, starting at the White Tower and extending behind the citadel, and returning by Porte Vardar to the docks, divides the city into three distinct zones. Then it is proposed to erect seven fire stations in the best control areas, and to lay down a complete system of fire-alarms and visible hydrants.

With this short preliminary I will now pass to the maps and slides which illustrate the strategic position of Salonika, with views of the great fire and the ruin which came in its train, and some of the conditions with which the city planner has to deal, and finally the plan of the city as it is to be laid out, leaving for another lecture the details of the architecture which give charm and dignity to this ancient city. Meanwhile there is one fact I would like to emphasise, and it is this: Every member of the City Planning Commission for Salonika will fight with every power he possesses against the shamelessly vulgar hoardings which disfigure so many of our English towns and cities. In this endeavour we will have, I believe, the unanimous support of the Greek Government and the Municipality of Salonika.

Correspondence.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

The Veterans' Association.

To the Editor of THE ARCHITECT.

SIR,—The Veterans' Association venture to ask not only the courtesy of your columns, but also your cordial co-operation in bringing more prominently before the public a scheme for the promotion of which the Association was formed. By means of this scheme the Empire will prove itself not unmindful of its duty by brightening and in a large measure securing the future of those who, in fighting for us, have handicapped themselves in the battle of life.

Above all things the danger of overlapping must be avoided, and it is sufficient to say that the work of the Veterans' Association in no way conflicts with that of any other institution, that it assists all, and that it has as its nucleus the Veterans' Club, which prior to the war filled a felt want, and which during the last four years has given most adequate proof of the wisdom and foresight of its founders.

The Veterans' Association is becoming gradually recognised as the central organisation of the Veterans of the Empire, but in order to meet the far-reaching needs of the future its scope must be widely extended. Accordingly, under the title of "An Imperial Memorial" this comprehensive scheme of a sound Imperial character has been brought into being, and by its means mental and bodily comforts will be conferred upon such of the ex-service men of the Empire as need a helping hand. Through it there will be provided a Veterans' Headquarters and a "clearing house" and facilities for obtaining every kind of information, advice and assistance. Especially will it afford the means of rebuilding and maintaining the health of those who should still be capable of adding to the strength of the Empire in peace as they were of safeguarding it in war.

This Imperial Memorial will embody in itself the duty which we owe to those who have stood between us and disaster. It is not intended to be a mere epitaph but a practical plan, promoted for the benefit and relief of those who have given so much for us, and always with the further intention of making them fit to carry on their duties as citizens. To those it helps it will be a token of our gratitude—an institution in which they themselves can take a personal pride. A small tribute indeed, but surely more practical than brasses or memorial stones. It will be a permanent and visible recognition of their own efforts and of their comrades' sacrifices, and when endowed and established on an appropriate scale, it will serve as an inspiration to the patriotism of future generations.

To carry out the project on adequate preliminary lines, a sum of at least £1,000,000 will be required for purchasing a site, erecting and endowing the necessary buildings for an enlarged Veterans' Club with at least 1,000 bedrooms, and its own extended organisations, with special reference to representation of the Dominions and Colonies, the United States of America, and Allies generally who have participated so gloriously in the war. This amount will also enable the Association to encourage the formation of kindred undertakings in other great cities of the Empire, and, as part of the whole scheme, to provide for the purchase and upkeep of a first convalescent home for men of His Majesty's Forces who have been discharged to civil life, many of whom will from time to time, unhappily, require treatment. From our personal experience, we confidently assert that such a convalescent home will help to fill one of the most urgent needs of the day. These discharged men cannot afford to pay medical fees, nor do they possess facilities for treatment in their own homes.

It is therefore essential that they should be given the opportunity of the benefits of an institution of their own, and that they should not run the risk of being relegated to infirmaries, and we are glad to announce that the Veterans' Association has now at its disposal a definite means of providing for this necessity, as it has secured the option of the purchase of a property in Epping Forest capable of accommodating at least six hundred patients, and in all ways admirably suitable as a convalescent home.

The Association appeals to all for help to establish this Memorial, which extends to the whole Empire, and in particular it appeals:—

1. To those who have been debarred from directly assisting by fighting for the Empire, and who now have an opportunity of helping to rebuild it in a way which will be a lasting tribute to the heroes who have fallen, and to our sailors, soldiers and airmen who, offering themselves unstintingly, have survived the risk, and whose future must under no circumstances become a reproach to us.

2. To those who have lost some relatives and friends, and who would gladly see some permanent, practical memorial erected to their memory.

Donations, large or small, should be forwarded to the Treasurers or the Secretary, Veterans' Association, 47 Bedford Row, W.C. 1. Any donations can, if desired, be specially devoted to the Convalescent Home, in which case they should be marked "Convalescent Home."—Yours, &c.,

AGA KHAN, DAVID BEATTY, LIONEL E. O. CHARLTON, Brig-Gen. R.A.F.; R. H. COX, CLAUDE CHAMPION DE CRESPIGNY, H. BARGRAVE DEANE, ARTHUR CONAN DOYLE, DENBIGH, Col.-Commandg. H.A.C.; E. R. FREMANTLE, LIONEL HALSEY, J. H. HERTZ, Chief Rabbi; ARTHUR R. HOLBROOK, Col.; W. VANSITTART HOWARD, LOUIS JACKSON, Major-Gen.; ROGER KEYES, RONALD B. LANE, Maj.-Gen.; A. F. LONDON, CHARLES F. SEBAG MONTEFIORE, ARTHUR PEARSON, A. T. SLOGGETT, Lieut.-Gen.; WILLIAM R. SMITH, Col. M.D.; MARK SYKES, H. L. TOMKINS, Lieut.-Col., Indian Army; ALFRED E. TURNER, Major-Gen.; BERNARD VAUGHAN, H. F. WILSON.

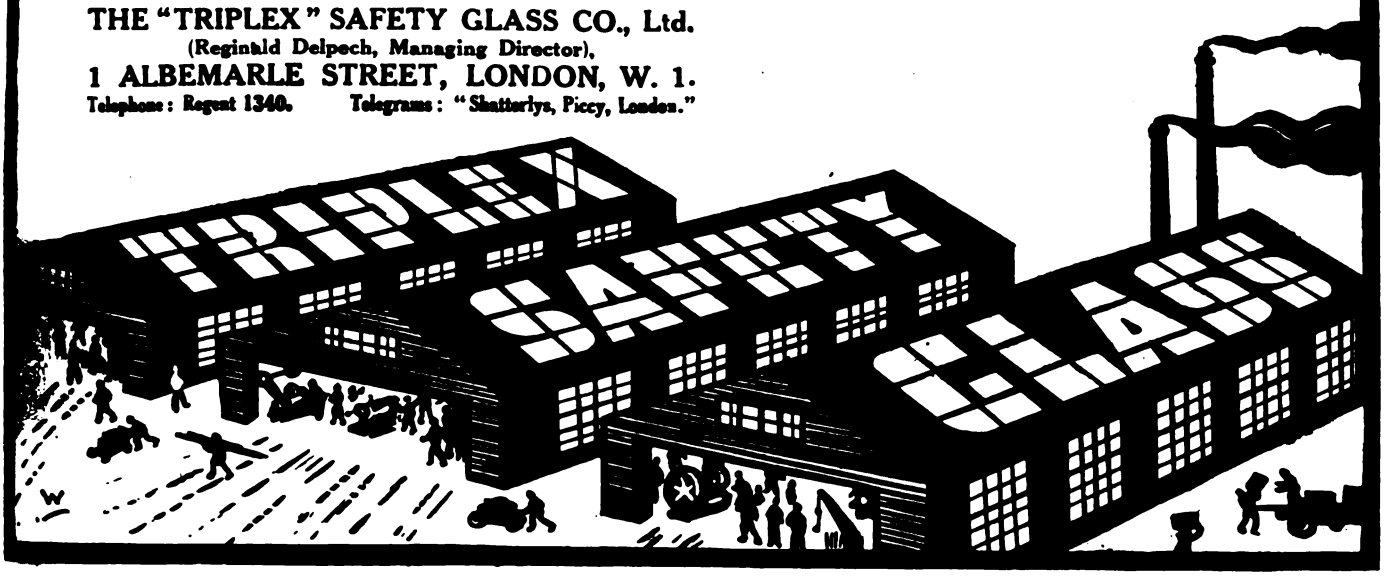
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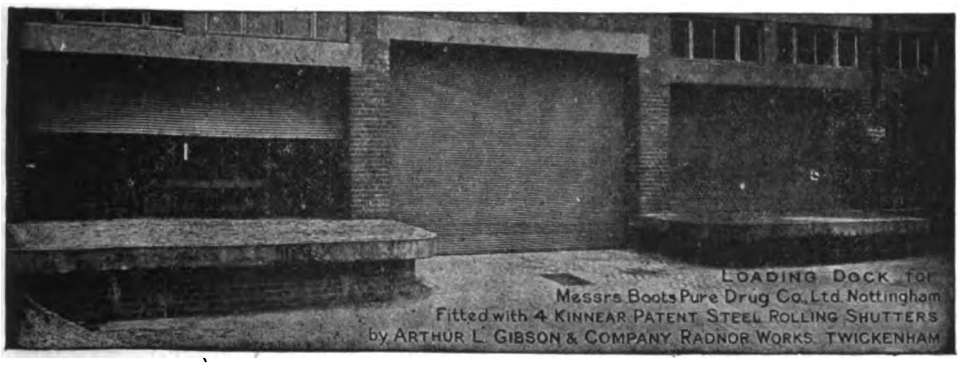
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Armistice Bell Ringing at Croydon.

THE members of the London County and Surrey Associations of Church Bell Ringers met at Croydon on Saturday last for the purpose of celebrating in their characteristic manner the signing of the armistice.

The rings of eight bells at St. John's Church and of ten at St. Peter's Church were rung at intervals during the afternoon, both the belfries being crowded with ringers and their friends while ringing was in progress. At the latter church the bells, which are beautifully in tune and in excellent going order, were cast and hung by Gillett & Johnston only a short time before the war, so that their special qualities had scarcely had time to be appreciated before their ringing was so abruptly interrupted.

In the evening the ringers were entertained at tea by Lieut. Cyril F. Johnston in Messrs. Gillett & Johnston's new canteen, which had been formally opened two days previously by H.R.H. the Duke of Connaught who was accompanied by H.R.H. Princess Patricia. Over one hundred of the firm's staff and workpeople were present to meet the 200 ringers, who included Mr. Thomas Walker, Secretary of the London County Association of Change Ringers, and Mr. J. D. Drewett, Master of the Surrey Association of Change Ringers.

At the close of tea the Archdeacon of Canterbury, Canon L. J. White-Thompson, the present Vicar of Croydon, proposed a vote of thanks to the firm for their hospitality, and said nothing had angered him more than the fact that a foreign ruler had been able to stop the ringing of church bells in England. Lieut. Johnston, in reply, said that for the last four years they had been making munitions of war, but they were now making arrangements to revert to their pre-war work of casting bells and making clocks, and for these purposes they hoped to retain all their present employees, who numbered about 1,200. He remarked that this was the first great meeting they knew of bell ringers since "Armistice Day," and he was very happy to have the opportunity of welcoming the ringers of London, Surrey, Kent, and many other parts of the country on such a memorable occasion.

A concert followed which was much enjoyed by the visitors.

General.

ABERFELDY Town Council have appointed Mr. Rhoderic Cameron, architect, local Fuel Overseer of the burgh.

THE late Mr. Alexander Knox, F.S.I., of the firm of Alexander Knox & Robb, 1 Bute Gardens, Hillhead, Glasgow, left personal estate valued at £5,512.

THE death is announced of Mr. J. G Johnston, builder, Leonard Street, Perth. Mr. Johnston was for many years 100 yards swimming champion for his native town.

PLANS for a bascule bridge over the new entrance lock in connection with the extensions at the Royal Albert Docks have been submitted by the Port of London Authority to the London County Council.

THE Local Government Board have decided to hold an inquiry into the application of the Ormskirk Urban District Council for sanction to borrowing powers in connection with their scheme for the erection of fifty houses off Aughton Street.

AT the last meeting of the Tredegar Council it was reported that Mr. A. F. Webb, the architect for the Council's housing scheme, had a sketch plan of the houses ready, and a meeting was fixed to inspect it. It is proposed to erect 500 houses.

AT a special meeting of the Sefton Rural District Council it was unanimously resolved that the Council prepare a scheme for the erection of 100 cottages in different parts of the Council's area where they are most urgently needed. The rents are to be 6s. per week, rates free.

AFTER the reading of a letter from the Local Government Board asking for particulars *re* the provision of working-class dwellings in the district, the inspector to the Knaresborough Rural District Council at their last meeting stated that eighty houses were required chiefly in Burton Leonard and Plompton.

LIEUTENANT KENNETH LEGG, F.S.I., of the surveyors' department of the London, Brighton and South Coast Railway, is home wounded. He joined up in the early part of the war in the Royal Fusiliers, served at the Front in the ranks, and was promoted to a commission, and this is the second time he has been home wounded since obtaining it.

IN connection with the scheme for the provision of additional office accommodation, the Staffordshire County Council have approved an estimate of £2,150 for the purchase of the site of the theatre in Martin Street, Stafford, and house adjoining belonging to the Stafford Corporation, together with two houses adjoining the theatre belonging to Dr. F. N Cookson, Stafford.

THE Rushden Urban Council have decided to proceed at once with their housing scheme for the erection of 100 houses, land for which has been secured. It is hoped to commence building operations by February. The surveyor, in conjunction with Messrs. Talbot Brown & Fisher, Wellingborough, is to be requested to prepare plans for making roads and sewers.

As a war memorial the Cleethorpes Council have approved a scheme for laying out 14 acres as a recreation ground, with suitable buildings to include gymnasium, swimming bath, concert and lecture hall, public library, and reading-room, and rooms suitable for the headquarters of all organisations interested in the welfare of young folk. The buildings will cost not less than £20,000.

A CONFERENCE on the Functions of Industrial Councils will be held under the auspices of the Industrial Reconstruction Council on Tuesday, December 3, at 6 P.M., in the Hall of the Institute of Journalists, 2 and 4 Tudor Street, E.C. 4. The subject will be introduced by Mr. E. McGegan of the Ministry of Labour, after which the discussion will be open. No tickets are necessary.

AT a meeting of Port-Glasgow Town Council, on the motion of Provost Mackie, seconded by Councillor Dick, it was unanimously agreed to appoint a committee to consider the erection of a memorial to the fallen and those who had taken part in the great war. The Provost said that out of 3,000 young men who had gone from Port-Glasgow about 10 per cent. had been killed, while many had been maimed and wounded.

PROVOST FERGUSON and a committee of representative citizens of Milngavie are at present considering a proposal for the erection of a suitable war memorial in the burgh. It has been suggested that it should take the form of a children's crèche or hospital placed in a convenient position, or a building that could be adapted for either scheme. The suggested memorial is expected to cost between £4,000 and £5,000.

SIR THOMAS MASON, in accepting a further term of office as chairman of the Clyde Trust in Glasgow recently, said in 1920 the Trust would have free cross-river communication. That involved Parliamentary power to carry out an agreement arrived at between the Corporation and the Trust for building an additional bridge across the Clyde at Finnieston. So far as the Trust were concerned, negotiations would be opened at an early date.

WE have received a small booklet entitled "Bergers' Mercury," which gives information concerning Bergers' paints, which are widely known and utilised for interior and exterior painting. Bergers' Matone, a leadless flat oil paint, which is washable, fadeless, and practically permanent, is well known, as is also the firm's Pompeian paint, a high-gloss finishing paint, and Bergers' lustro varnish, with which staining and varnishing can be completed in one operation.

A REPORT issued in connection with the Manchester Municipal College of Technology states that the proposed extension scheme was designed to provide internal-combustion engine laboratories, with aeronautical and motor-car sections, a new foundry and boiler-house at a total cost of about £20,000. It is probable, however, that when the extensions are carried out they will have to include a number of new lecture rooms and laboratories, and perhaps a new library.

WE regret to have to announce the death, in his forty-second year, after a short illness, of Mr. H. Cecil Walker, the eldest son of Mr. Henry C. Walker, chairman of Waygood-Otis, Ltd., Falmouth Road, London. Mr. Walker entered the shops of R. Waygood & Co. in September 1893, and in time occupied the position of chief electrical engineer to the company. In November 1910 he was appointed to a seat on the board of directors, and this he retained after the amalgamation with the Otis Elevator Co., Ltd. He rendered great service in the design of the electric lifts of the company, and by this means contributed to the reputation which they enjoy.

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THE ARCHITECT
AND CONTRACT REPORTER

VOL. C.—2607. DECEMBER 6, 1918.

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Party Politics or Progress?

On the brink of the first election after the war it is natural to consider the bearing of politics on our lives as individuals and on our destinies as a nation. In order to effectively conduct a great war it has been necessary to eliminate party politics; may it not be as vital to do so in the coming era of peace, and, if so, what are the best means of securing the end we have in view?

We consider we have representative government, and with each accretion to the numbers of the electorate it is claimed that we are better able to ascertain the will of the people, but a little reflection will show that we are as far off from that consummation as we were before. The only government which can be said to be fully representative is that in which the proportions of the representatives are similar to those of the electorate who return them.

But at present we have a system by which the Liberals of Birmingham, the Unionists of Wales and of Southern and Western Ireland are unrepresented, and we have often seen a numerical majority of some 100 to 150,000 of the whole electorate return an enormous preponderance of representatives of one political expression of opinion, a result frequently entirely reversed at a following election by the equally small majority of another party. This system leads inevitably to undue prominence being given to controversial differences, each party wishing to leave its stamp on legislation while neither is entitled to claim that it truly represents the political complexion of its party in the country under a system of Proportional Representation, by which we should know that the balance of parties in the House of Commons very nearly corresponded to that outside it. Majorities would probably be so small that the only working policy of a Government would be the promotion of measures which generally commended themselves to all; the sectional and controversial issues would have to be put on one side, and those measures on which there is real unanimity would take their place. Had it been necessary to obtain a verdict on the vigorous prosecution of the war it would have been readily effected, as all but an insignificant majority wished it, but measures like the Finance Act of 1909-10, the Home Rule Act, and the last Education Act would probably have never been placed on the statute book, and it is doubtful whether the country would have suffered much loss. On the other hand, it is more than possible that a Government, being deprived of the power of passing controversial measures, would deal with the laws relating to rating and the transfer of land, to the institution of the decimal system in weights, measures, and currency, the improvement of means of transit, and to measures for the benefit of our trade and industries. These and other issues which will occur to us are of importance to the welfare of all, but are unlikely to receive attention from a Government framed on party lines. We should get rid at a stroke of the pen of constituencies small enough to be nursed by politicians, of the necessity for personal advocacy, and of many other means by which the judgment of voters is likely to be unduly swayed. And we should eliminate what is termed the swing of the pendulum, for the differences which are shown in the results of the polls resemble small oscillations, rather than swings, of opinion. We should, in a word, be governing by agreement on issues on which opinion had crystallised instead of promoting the experiments of extremists on either side.

Under a system of proportional representation the constituencies would be enlarged, embracing counties and county boroughs. Each of these would return a given number of members and each voter would have the same number of votes as there were members. The total number of votes cast would be so large that it would become easy to closely follow the political complexion of the constituency in allotting members to it. With a total two-thirds majority a party would obtain two-thirds of the representation, the order of the members returned being determined by the actual number of votes cast for them, and those of the one-third minority would follow in the same manner. It is difficult to understand the opposition of those who say they believe in representative government to so logical a system of obtaining it.

Most questions are soluble if we reason out our conclusions from a basis of fact, but rhetoric, that great weapon of the politician, is useless. We may draw glowing pictures of reconstruction, but what has been proposed needs money. We have a National Debt the interest of which now amounts to nearly 400 millions. Three-fourths of this has been provided during the war by the excess profits tax, which will naturally end when peace comes. Unless Germany is to pay the cost of the war it is fairly obvious that the country is in no position to add to its already enormous burdens. We are inclined to think that whatever may be said on electoral platforms, we shall either have to create more wealth by increased production or else shall find we have been contemplating another of the political mirages with which we have been so familiar in the past.

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Illustrations.

HOUSE NEAR CIRENCESTER, GLOUCESTERSHIRE.
NEW CHURCH, WINKSLEY, NEAR RIPON. (Plan given, page 309.)
PROPOSED CHURCH, GOLDER'S GREEN. (Plan given, page 310.)

Notes and Comments.

The Law of Ancient Lights.

THE short Act, the adoption of which the President proposed at the Business Meeting of the R.I.B.A. to prevent the acquisition of future rights of light, may, if put forward before the end of this year, be included in a Government Bill and passed into law without expense to the Institute, and we are glad that the meeting after considerable discussion adopted Mr. Hare's proposal. We were surprised that any opposition should have been offered and still more surprised at its nature. Several speakers seemed to be somewhat ignorant of the nature and effect of the present law, and others hardly realised the extent to which existing by-laws provided for the proper lighting of buildings. Other speakers spoke of the necessity of neighbourly accommodation between adjoining owners with a view to obtaining mutual amenities, and suggested the setting up of a new authority to provide such amenities. It is odd that it should not have occurred to speakers that there is nothing whatever to prevent any two owners coming to any agreement which may seem desirable to them! Mr. Joseph drew a moving picture of the sad plight of a householder against whose boundary a large factory was built, but the probability is that in such an event the house would be demolished, as its site could be utilised for more valuable purposes. But all's well that ends well, and if the Bill goes through the first step in the removal of an intolerable and unnecessary anomaly will have been taken, which may be followed by another measure directed towards the extinction of existing rights of light under some system of purchase or compensation.

Shorter Hours.

IN a leading article "The Employer" very temperately and well puts the salient facts of the labour situation. It says: "As everyone knows, the country is heavily in debt, and unless its industries can be expanded and its markets recovered, there is no alternative to financial collapse, before which any grievances over hours of labour would pale into insignificance." It argues that the employer is perfectly willing to shorten hours if a minimum standard of output can be decided upon. "The needs of the country have made production the foremost aim, and production must therefore be the criterion of the hours question. If restrictive conditions are to continue so that the output of the 53 hours week cannot be yielded in less than 53 hours, it would be suicidal to shorten the working week. If, however, the abuses of the old system are swept away, and a reasonable rate of work is agreed upon, the working week can be shortened to the advantage of all." This is sound common sense, and we hope the workers' leaders will recognise that it takes two to make a bargain and that what they want must depend on their willingness to make one. The same issue of our contemporary contains a very thoughtful and well thought out article by Dean Inge entitled "The Evil of Want of Head," which we are glad to see under the signature of so prominent an ecclesiastic. He says, "The more we can get rid of those stupid and unreal abstractions, 'The State,' 'Labour,' 'Capital,' &c., and see life as it is as a society of human beings, bound together by economic laws which we did not make and cannot disregard, but united also by the same needs and ambitions and virtues and defects, the better is the hope that we may escape the ruin which has fallen upon Russia, and which at present seems to be threatening the far better organised nations of Central Europe."

Our Housing and Town Planning Reviews.

IN consequence of the amount of matter to be dealt with we have decided to give a Housing and Town Planning Review every fortnight instead of every month, dispensing with a monthly Review of the Building Industry and its Crafts, or rather distributing such matter as we should give under that heading throughout our issues. This will enable us to find more space for the schemes which from week to week are being brought forward, and which for some time to come are likely to be more numerous than they ever have been in the past. There will also be great foreign schemes of importance, such as those prepared by Mr. Mawson for Athens and Salonica, which we wish to record and which it is likely will be the precursors of similar projects in the towns which the war has resulted in elevating to the rank of capital cities. As far as housing goes we should like to be able to illustrate examples which would show that architects were thinking out new problems on new lines, instead as is too often the case making considerable sacrifices in their endeavour to make a modern cottage assume the appearance of its predecessors of past ages.

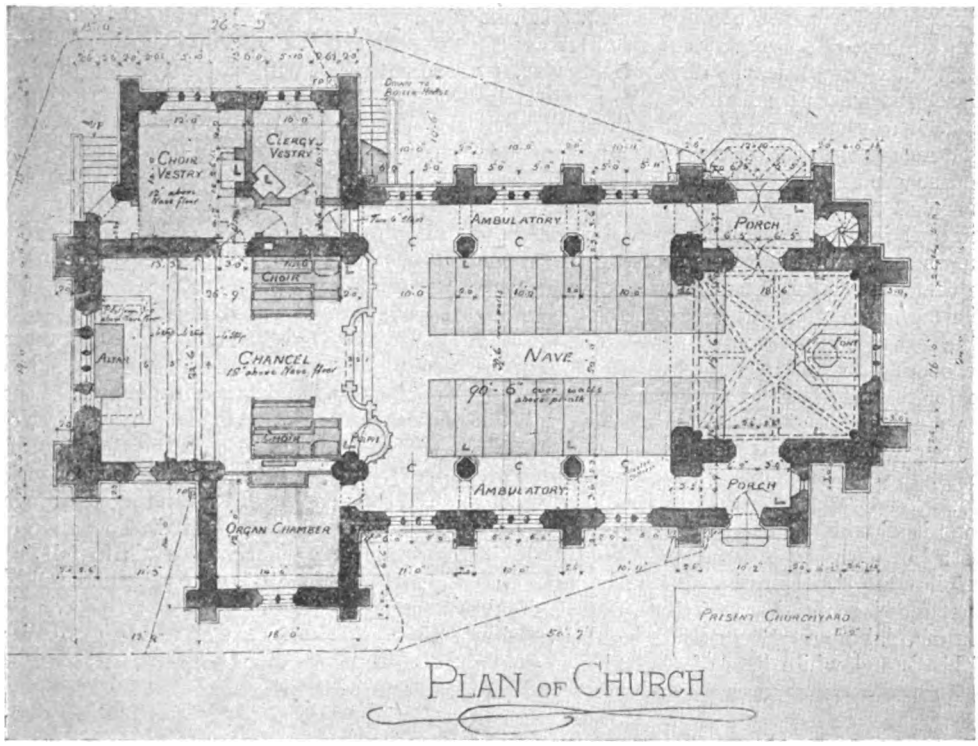
Coal and Ownership.

ONE of our daily contemporaries urges that colliers cannot be expected to carry on their work in the future for the benefit of private owners because it is unpleasant and laborious work. We think such an assertion is unsound, because we believe that colliers would work equally willingly for anyone who would pay the same wages, and we do not for a moment believe that the average collier is an altruist who would be cheered in his daily task by the knowledge that his labour benefited the State. As to profits, we wonder if our contemporary has ever heard of the "sliding scale," by which wages rise or fall automatically with the selling price of coal. The sliding scale has been settled by representatives of the masters and men in conference, and if unfair rates have been agreed upon it is open to revision. We are placed in this dilemma if we accept our contemporary's standpoint. If the State were to acquire the coalfields it would presumably have to purchase them at a sum, the interest of which would have to be provided by taxation, or alternatively to be charged against working expenses. If the price of coal is to be raised by the payment of higher wages to the men the industries which depend on coal would be correspondingly hampered, while if the price of coal were less than the cost of its production the State would have to find the difference by taxation. We believe that in many cases the introduction of coal-cutting machinery would diminish the cost of coal as it has done in the United States, and would involve the employment of fewer men in the "distressing and degrading" form of labour. Is this not a solution which would meet the case better than the State purchase of coal mines?

The Prix de Rome Award.

WE congratulate Captain H. Ch. Bradshaw, R.E., of Heathfield Road, Wavertree, who has been awarded the "Prix de Rome" prize for architecture in connection with the British School at Rome. Captain Bradshaw won the Lever prize in competition for laying out a park at Walton Hall estate, and was appointed architect by the Corporation for carrying out the scheme. He joined the Army in the early stages of the war, was commissioned in August, 1915, served in the Somme battle, at Vimy Ridge and Paschendaele, and afterwards went to Italy, where he distinguished himself and was awarded the Croix di Guerra.

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PLAN OF CHURCH

The Cable Censorship.

THE recent correspondence in the "Times" on this subject, initiated by Lord Northcliffe, shows that this little understood subject is of capital importance to all traders in this country during the reconstruction period. We think, therefore, that it is well to explain the legal foundation upon which the Cable Censorship rests, the service which it has done during the war, and the service which it can be made to do in the interval before peace is finally made.

At the beginning of the war the Government announced their intention of taking advantage of the powers reserved to them under the treaties governing the cables, and of suspending all telegraphic intercourse, but they went on to say that, as an act of grace, they would allow certain cables to be passed if they complied with certain conditions. It is clear, therefore, that so far from neutrals having any ground of complaint if their cables are stopped, they have reason to be thankful if they are passed. This put the Foreign Office in a very strong position in their dealings with neutrals, of which there is reason to think that they did not take the fullest advantage, with the result that in the early stages of the war the blockade was ineffective, and Germany, as the Prize Court cases show, was able to arrange an elaborate system of trading through dummy consignees in neutral countries. In fact this power of thus controlling the cables put a stronger weapon into the hands of this country than anyone before the war had foreseen. It gave this country the power, as Mr. Gilbert Wood has pointed out in his letter to the "Times," of surveying the trade of the world. This was due to the fact that, Germany's cables having been put out of action, most of the cables of the world passed through England. If, for instance, Denmark, Norway, or Sweden wished to cable to Spain or South America, the cable came through London. Therefore this country had both the power and, according to international law, the right of facilitating the trade which was favourable to her and her Allies, and of stopping the trade which was not. It is no secret that during these years of war the department which manages this weapon has accumulated a vast mass of material which has been of great service during the war, and can, if properly used, be of almost equal service during the reconstruction period.

The main service which the Cable Censorship has done during the war can be summed up in a sentence—it has, in conjunction with other branches of the censorship, made an economic blockade possible. To make an economic blockade possible it is not enough to be able to stop ships. The ships stopped and their cargoes will be neutral; and, in order to deal effectively with a neutral ship and its cargo, evidence must be forthcoming that their cargoes are intended for the enemy. Unless that evidence is forthcoming, and the Prize Court is convinced by it, the ship and cargo will be released, and the Crown may be obliged to pay the costs of the delay. It is safe to say that in almost all the cases which have come before the Prize Court the evidence on which ship or goods have been condemned is intercepted cables, intercepted wireless, and intercepted letters. In other words, it has been the evidence furnished by all these branches of the censorship which has exposed the tissue of fraud elaborately woven round the actual shipping documents. Thus the Cable Censorship has been instrumental in condemning, according to the statement of Earl Stanhope in the House of Lords, some thirty million pounds worth of goods.

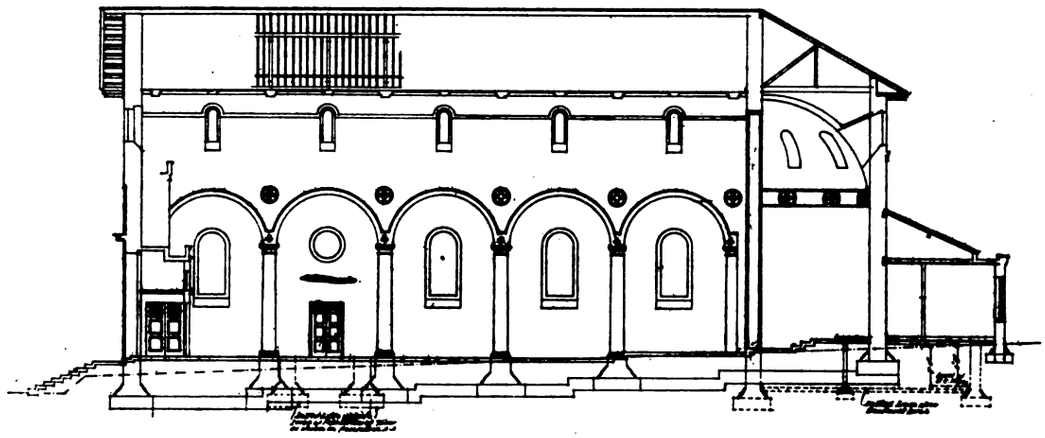
It is clear that a department which has been capable of this achievement must have accumulated a mass of information about enemy firms, about those many nominally neutral firms which have flourished exceedingly by smuggling goods into Germany, and about the devices which all these firms have used to evade our blockade. It is clear that it must be in possession of information which will enable it to distinguish between those firms in neutral countries which are pro-ally from those which are pro-enemy. This is very valuable information for the reconstruction period, for it enables us to distinguish those firms who will use any facilities we give them in the Allied interests from those who will use them in the enemy interests. We must favour the first not only from sentiments of gratitude, but also from motives of policy. If neutral firms who have in the past favoured the enemy are given cable facilities, there is reason to fear that Germany will, through them, try to make contracts for post bellum trade on a large scale. If this happens two results will follow. Firstly, prices will be raised as against the Allies; and, secondly, the cables will be so congested with nominally neutral but really enemy business that the Allies will be unable to make the best use of their control of the cables. For this reason it is obviously bad policy to remove these suspect firms from our Black List—a course which, according to Lord North-

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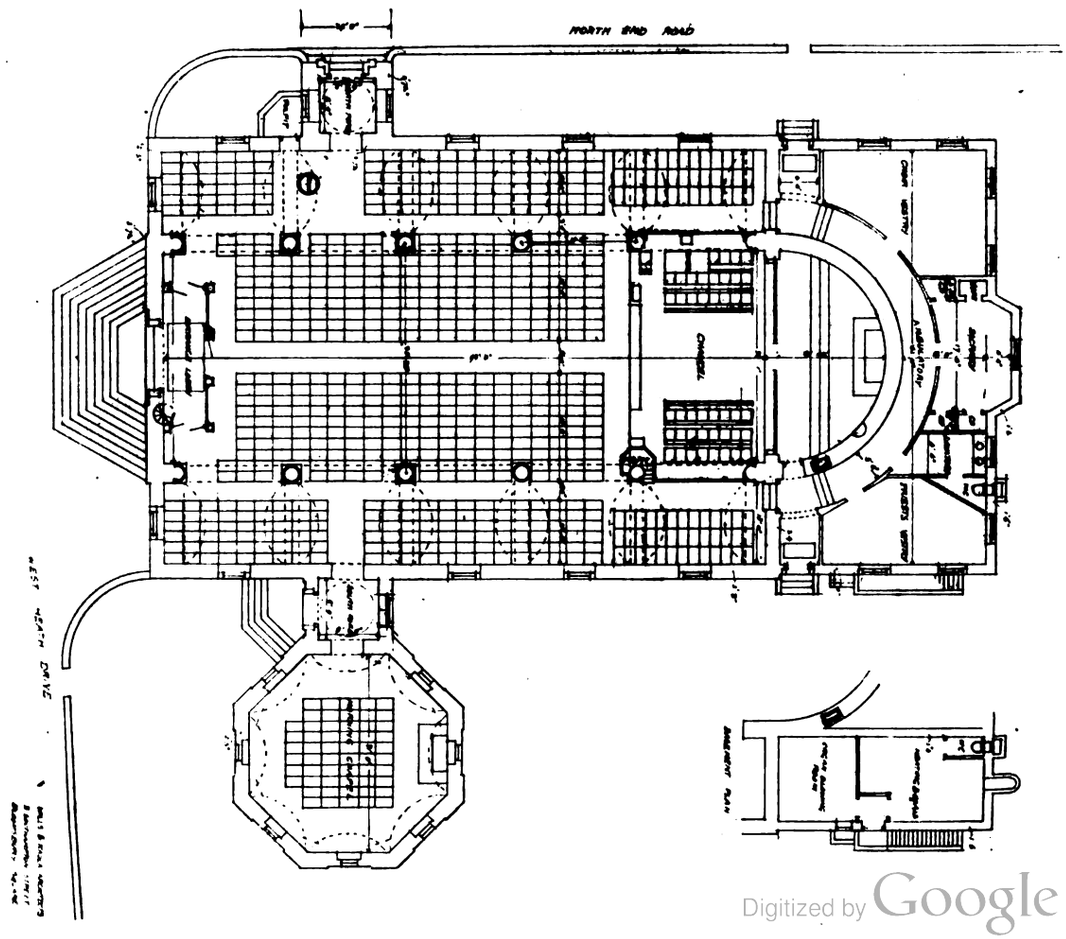
cliffe, there is reason to fear is being pursued. If this course is being pursued, it is a mistake of a similar nature which led our rulers, in the early days of the war, to allow all sorts of trade with neutral countries under the mistaken idea that any trade profitable to the individual trader was profitable to the nation, even though it assisted the enemy and so prolonged the war. So now, if these suspect firms are encouraged by the granting of the facilities which removal from the Black List implies, though individual traders may grow rich by supplying them, the result will be that material will be diverted to the reconstruction of Germany which might have gone to the reconstruction of the Allied countries; and thus an embittered rival will the sooner be put into a position to compete with us again for the trade of the world.

If, then, we are to devote in the first place all our energies and our raw material to the reconstruction of the Allied countries, the Cable Censorship must be in some form retained. What that form should be and under what conditions it should work is another question. We would suggest, however, that some account should be taken of the following considerations: Firstly, now that the war is suspended some share of that control should be given to commercial men. Secondly, it would probably be helpful if black and white lists of neutral firms were compiled as a guide to the British trader—the consuls of a new type, whose appointment is long overdue, might be entrusted with this duty. Thirdly, the position of those associations of neutral traders through whom the Allies' work should be altered. We depend on them, to a large extent, to separate the sheep from the goats among their own countrymen. But Prize Court cases would seem to show that they have not always been successful in making this separation. Inter-allied committees of business men should take over some of the work done by these associations, or, at any rate, the Allies should be strongly represented on them.

We are sure that Cable Censorship, operating under some such conditions as these, would exert an influence of the first importance in facilitating the priority of reconstruction in the Allied countries. No doubt we are all anxious to escape from the red-tape of Government control; but we must not, in our eagerness to regain our freedom, heedlessly scrap the advantages which that control may occasionally give. To demand complete freedom, no matter what the cost, is to fall into the fallacy into which the hide-bound free trader fell. That fallacy went near to ruin the country; the continuance for a short time of a measure of Cable Control will, we are convinced, be no small help towards its speedy reconstruction.



LONGITUDINAL SECTION



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The Concrete Institute.

PRESIDENTIAL ADDRESS.

By H. D. SEARLES-WOOD, F.R.I.B.A., &c.

GENTLEMEN,—I have to thank you for electing me as your president, an honour which I highly appreciate.

There is a slight improvement in our financial position, but we are still greatly hampered by want of funds. We have been able to issue further volumes of our Transactions, so as to include the papers read in 1916-17; we hope to keep up this issue of the papers read session by session in the future.

The "Mnemonic Notation for Engineering Formulæ" and "Loads on Highway Bridges" are in process of publication.

The Board of Trade has printed a list of timber substitutes, compiled by the Institute, and to be obtained on application to the Secretary. This is only a first issue, and we invite all who wish to be added to the list of those making these substitutes to communicate with the Institute, with a view to their names being added to the lists. The timber shortage appears to be so great that there must be a special need for such a brochure at the present time; and as the list is referred to in the "Board of Trade Journal," which circulates all over the world, the demand is likely to be very large.

The relations between architects and specialist engineers have been dealt with by the Institute in a detailed report.

Members of the Institute will, I am sure, be glad to have a resumé of our association, through the medium of the Science Committee, with the Department of Scientific and Industrial Research.

Commencing with the year 1914, the Institute got into touch with various laboratories, and ascertained that about a couple of dozen were furnished with most of the necessary apparatus for making investigations upon concrete and other building materials. The question of finance was of course a prime factor in any such research; consequently in 1916, when the Advisory Council on Scientific and Industrial Research was organised, the Institute decided to make an appeal to it for assistance in carrying out the proposed work. On two occasions a deputation interviewed the Chairman and Secretary of the Council, and eventually the sum of £830 was allocated for the year then current, being more or less the proportionate amount of the total expense which the research was expected to involve.

This investigation was to be made through the medium of various laboratories, the work being restricted to concrete and concrete aggregates. Our Institute was established as the maintaining body, and the laboratories undertaking the investigation were:—Birmingham University, Bradford Technical College, Cork University College, Dublin University, Edinburgh University, Huddersfield Technical College, Manchester Municipal School of Technology, Nottingham University College, and Salford Royal Technical Institute. Huddersfield and Nottingham withdrew at an early stage, war conditions adversely affecting them, but to the above list of laboratories we were subsequently able to add Cambridge University.

Of these ten laboratories, work of a more or less practical nature has been actually done by Birmingham, Cork, Dublin, Manchester and Salford; Cambridge, while being anxious to commence operations, came in only just prior to the stage of our receiving a communication from the Research Department to the effect that it did not see its way to recommend a renewal of the grant for the year now current, for reasons stated in the correspondence.

After our Report for 1917 had been sent in to the Department that body took it into consideration, and subsequently we received a communication from it to the effect, namely, that the Advisory Council decided that "they were unable to recommend the grant, as in their opinion the research should be suspended until more co-ordination and continuity of effort could be secured under adequate supervision." I would add further that the Institute was so satisfied that the Advisory Council had not done justice to the work undertaken and the results obtained and obtainable, that it appointed a small sub-committee to consider a suitable reply, but, in spite of all, the Advisory Council, at a later date, informed us that it could not reconsider its decision to suspend the research.

With regard to the list of aggregates that we have filed at the Institute, members could greatly assist by obtaining from the Secretary a list of aggregates in the neighbourhood of the site of any new buildings they are erecting, and by reporting on any of the materials after use.

The Standard Specification for Reinforced Concrete is now nearly ready for publication, and in reference to this I should like to call the attention of members to the generous action of Messrs. A. Alban H. Scott and Percival M. Fraser in placing at the disposal of the Institute the copyright of their Standard Specification for Reinforced Concrete Work, with full permission for the Institute to make what use the latter deems essential in respect to this copyright. I feel that I cannot speak too highly of Messrs. Scott and Fraser's action in this respect, and I am sure all members will be at one with me in desiring to place on record our hearty vote of thanks to them at the first public meeting subsequent to receiving their letter stating the decision at which they had arrived.

The "Recommendations to Clerks of Works and others engaged in the execution of Reinforced Concrete Work" has been approved for publication, and is now passing through the Press.

The sub-committee appointed to deal with the use of high-tension steels in reinforced concrete has held several meetings, and is proceeding with the manufacture of beams and slabs for immediate testing purposes.

A sub-committee has been appointed to investigate the question of the use of reinforced concrete in shipping, consisting of representatives of the Admiralty, the Board of Trade, Lloyds Register of Shipping, the Institution of Naval Architects, and the Concrete Institute. At the first meeting Sir Henry Tanner was elected Chairman, and a preliminary programme was drawn up.

The question of the reconstruction of the building industry after the war, as dealt with in the Report of the Materials Committee of the Ministry of Reconstruction, is of great interest to us.

The Government proposes to appoint a post-war Priority Committee of Ministers to determine broad lines of policy with regard to priority, and also a Standing Council for consultation with and for securing the advice of representative trade bodies for furnishing the Cabinet Committee with considered counsel and assistance in the detailed execution of the policy determined upon.

The scheme suggested in the Report is an organisation which, acting in co-operation with the Standing Council, will secure (*i*) stimulation of production of all essential building materials, (*ii*) utilisation of available materials and labour without delay, (*iii*) direction of the building industry by the organisations directly concerned, and (*iv*) gradual relaxation of control and entire freedom from control at the earliest possible date. The scheme is as follows:—

The establishment of a Central Building Industries Committee to determine (on lines of policy laid down by the Standing Council) all matters connected with the production of materials and the allocation in the national interest of the building materials and resources of the country. For the purpose of administration, England and Wales will be divided into regional areas, nine in number, and for each of these areas a Regional Building Industries Committee will be established. The functions of these Committees will be to act under general direc-

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tions of the Central Committee in (*a*) stimulating production within their area, and (*b*) the regulation and distribution of building materials. This will be done by means of the issue of building permits by the Regional Committees. The Central Committee will ration the Regional Committees with materials, and the Regional Committees, with these quantities of materials before them, will decide for how many of the applications for building linences before them the materials available will be adequate; and if the materials are only sufficient for 50 per cent., they will issue permits for only 50 per cent. of the buildings applied for.

The only works to proceed without permits are, including works of repair, under £500 in value. This limit will be varied by the Central Committee as circumstances require.

There is no doubt that the people in this country are very anxious to obtain relief from the troublesome necessity of getting their permits, and every effort ought to be made to put on these Committees people whose interest should be to terminate the present control at the earliest possible moment.

There appears to be plenty of steel for constructional purposes, and the output of cement does not present any great difficulty; so that the building industry, in which we are interested, may look forward to a very busy time, if the existing high prices of labour and materials are brought down to a reasonable figure. The Report does not make any proposals with reference to the control of prices, nor does it suggest that manufacturers should sell otherwise than in the open market. If the works producing building materials are enabled to proceed to their full productive capacity as early as possible, and thus cheapen production directly and through the reduction of on-cost, and also if labour is forthcoming and will but increase its output, then the building industry will be re-established soon.

The question of finding work for the returned soldier is one of the most serious problems that will be within the purview of the Regional Committees, and in this connection the Cottage Building Scheme will be of great use as affording opportunities for employment when there is labour available; the Housing Scheme which the Government is subsidising will make a useful reservoir to be drawn on where employment is needed.

So much has been said about the housing problem that it is difficult to find any point not touched on, but I should like to suggest that the insulation of walls and ceilings to make warmer cottages is worthy of consideration; and if this is done the ventilation of the rooms must have careful attention, as the breathing power of brick walls and plaster ceilings is of considerable value in small rooms.

A series of experiments on solid floors for cottages is now being carried out by a Committee appointed by the Local Government Board at the Testing Station of the British Fire Prevention Committee. The object of the inquiry is to ascertain the most economical and efficient form of solid flooring as a substitute for timber construction.

In connection with demobilisation, it might be of assistance to some of our members with the Forces if we took action, as some of the other technical societies have done, to obtain the early return of our members as pivotal men. For those who do not get early release it would be useful if they could take up some study in connection with the occupation they propose resuming on their return to civil life. Mr. William Dunn has offered, as Lecturer and Instructor, to take charge, for the study of reinforced concrete, of a class of young men released from service.

The War Office is offering every encouragement for these studies, and I think that this is a subject that ought to occupy the attention of the Concrete Institute. It is proposed to establish an entrance examination as soon as possible after the war. It would help young men, if it is made known, that the fact of having followed such a course of study would be accepted as a qualification for admission to the Concrete Institute.

Architects' Fees for Housing Schemes.

In fixing the scale of charges for the development of land, or for housing schemes, special arrangement will usually be required according to circumstances, but for ordinary cases the following are the charges:—

(*a*) *Housing Schemes and Laying-out Estates.*

For the preparation of a plan or scheme from existing maps, showing roads, building plots, and buildings in block, and including conferences with officials of local authorities, but not including surveying, levelling, contouring, or the preparation of detailed plans of buildings, the remuneration is as follows:

	Per Acre.
For the first 25 acres	£2 2 0
On the next 275 acres	1 1 0
On the remainder	0 5 0

Minimum charge, 25 guineas.

(*b*) *Roads and Sewers.*

For preparing working drawings and specification of roads and sewers, obtaining tenders and advising on the same and in the preparation of contract, furnishing to the contractor one copy of the drawings and specification, general supervision as before defined, issuing certificates, and passing and certifying the accounts, the charge is 5 per cent. upon the cost of the works. Should the works not proceed after the preparation of the drawings and specification the charge is 3 per cent. upon the estimated cost.

(*c*) *Buildings in Housing Schemes.*

In housing schemes the charge is 5 per cent. on the first 12 houses, 2½ per cent. on the next 60, 1½ per cent. upon the remainder. This percentage covers the ordinary variations in type of house and such minor modifications as are made to avoid monotony in appearance.

Where the local authority assumes responsibility for the supervision and carrying out of the work, the above fees may be reduced by one-third.

This scale is not necessarily applicable if the carrying out of the work is effected in instalments and consequently deferred over a long period of years.



HOUSE OF EDMUND S. TWINING, SOUTHAMPTON—J. J. William Adam, Architect. From the "Architectural Record."

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Monthly Review of Periodicals and Books.



THE BEARD RESIDENCE, GLEN COVE.—L. I. H. Mayer, Architect. From the "Architectural Record."

Our Architectural Papers.

The Architectural Journal.

The November number of the "Journal" contains an article on the Development of Cities by Paul Waterhouse, in which he states that both Evelyn's and Wren's plans for London after the Fire were totally unfitted for modern purposes, since they were based on the convergence of traffic in central positions instead of its dispersal. London in those days had one centre and not several. Mr. Waterhouse points out the advantages of ring roads and of parallel roads for dealing with modern traffic problems. The report of the Conference of Representatives of Allied Societies and the R.I.B.A., with which we shall deal at a later date, is given. We are glad to see that it is recommended that it is reasonable that architects should be allowed to put up their names unostentatiously in front of buildings in course of construction. Mr. Reginald Blomfield reviews Mr. Tilley's book on the Dawn of the French Renaissance.

The Architectural Review.

The November number of the "Review" contains an interesting account of Sutton's Hospital in Charterhouse, by Gerald S. Davies, exceedingly well illustrated. Familiar as all are with the Charterhouse by name we could wish it were more frequently visited, as it is one of the few Elizabethan domestic buildings now remaining in the heart of a great town. Marius Ivor suggests a new Theory of the Parthenon, and propounds the startling theory that the outer range of columns which hide the Panathenaic frieze were not a part of the original design, but a later addition, as it is only lighted at present by reflected light from below. According to this theory, which has been suggested by Mr. Walcote, the effect of the frieze was deliberately sacrificed in order to obtain the full effect of a peripteral temple. Mr. Davidge gives a most interesting account of "The Growth of London," illustrated with plans of different dates, and the remaining matter consists of a short account of Stonehenge and some book reviews. The number is a very good one.

The Architects and Builders' Journal.

The "Architects and Builders' Journal" has contained some good illustrations of detail and of monuments, that of the Arch in the Piazza Cavour at Florence being especially interesting as showing how much of the simplicity of the Renaissance is lost in modern Italian work. With regard to the architectural "incident" of the month —Major Pawley's scheme—our contemporary takes the course of obtaining a signed article on the subject from a fervent admirer of the effort. This can doubtless be put down as an individual opinion, and may possibly indicate a desire not to commit the Journal to an official opinion. We do not know whether this is so or not, but we think there is now no reason why anyone should hesitate to say what they think!

The Builder.

The "Builder" has illustrated some good and interesting work of Morley Horder in Gyde Orphanage, Painswick, but its most interesting feature has been the continuation of Professor Lethaby's articles on a National Architecture, the ninth of which has now been given. It is a pity that Professor Lethaby and others who have firmly founded theories are not among those who carry out most architectural work, since actual exemplification is the most helpful guide of all. Professor Lethaby is a master of incisive phrase, as when he says, "Early carpentry was masonry in wood, late masonry was carpentry in stone." The "Builder" in dealing with Major Pawley's scheme suggested that it might be open to drastic criticism, which it did not indulge in; but we cannot understand its somewhat complicated attempt to suggest a distinction between a memorial scheme and one of town improvement, as anything in the nature of a big memorial unless it consists of sculpture alone must necessarily involve an attempt to deal with the adjuncts of buildings and with buildings themselves.

The Building News.

The "Building News" has illustrated more architects' working drawings and given some somewhat belated illustrations of the Wellhall scheme at Woolwich. It contented itself with illustrating Major Pawley's scheme and giving his description of it. This, after all, is the neatest way of remaining neutral about a controversial issue! But the "Building News" has been by no means neutral on the subject of the State and municipal arrogation of the functions of the private citizen, and its comments have been both terse and much to the point. We wish all the technical Press had been equally outspoken on the subject of this great question.

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The Irish Builder and Engineer.

The "Irish Builder and Engineer" often contains well written articles and good comments on topical events. Its leading article of November 2 calls attention to the enormous difficulties of the problem of restoration in the ruined portions of France and Belgium, and emphasises the value of the exhibition in the Brooklyn Museum, of which Mr. Goodyear is curator. In this is shown the optical refinements which Mr. Goodyear has discovered in the cathedrals of Paris, Laon, Soissons, and Beauvais. The writer urges that in any restoration work these refinements should not be lost sight of. We wish the "Irish Builder" would more often give illustrations of old Irish work, for Ireland is an almost undiscovered country to most of us here, and her older buildings possess unusual interest.

American and Colonial Architectural Papers.

The American Architect.

The "American Architect" has illustrated the Bank at Ohio, designed by Louis H. Sullivan, which should prove, if any proof were needed, how impossible it is to escape successfully from what are termed the "trammels of tradition." Mr. Sullivan is an able architect but he only succeeds in creating what may be termed a Frankenstein of architectural design, and yet his work shows evidence of being the outcome of both thought and skill. The "American Architect" has during the month illustrated some interesting farm buildings and a finely designed Department Store at Toledo, Ohio, where the architects have been able to reconcile commercial claims with a simple and dignified arched and columned front.

The Architectural Forum.

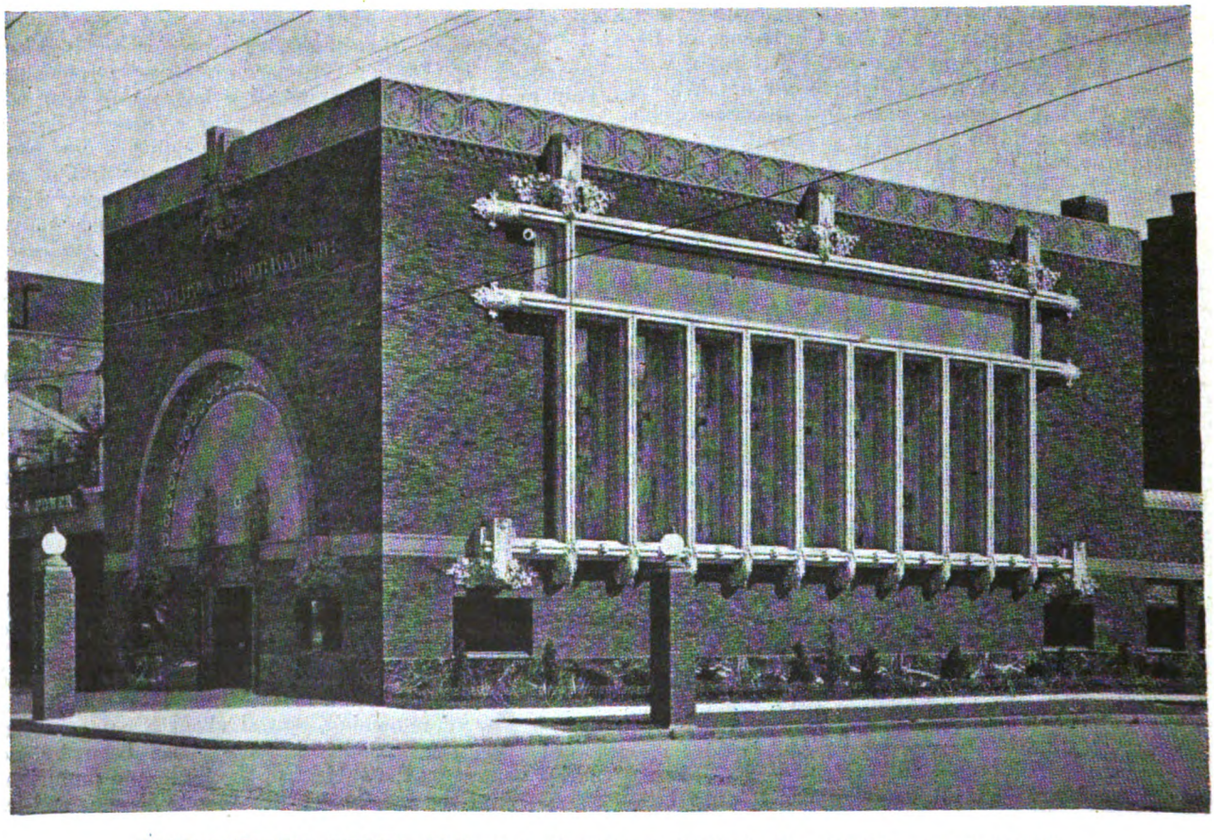
The "Architectural Forum" for October is a church number containing an article on the small church by A. F. Marlowe, a number of illustrations of contemporary work which include a very interesting English example—the chapel of Sidney-Sussex College, by P. H. Lyon, an interesting example of refined Renaissance work which resembles that of Mr. Greenslade in its avoidance of capitals and other features. The American churches given are none of great merit. The Church of the Epiphany, Sherwood, Philadelphia, by Day & Klauder, is perhaps the best of those shown, but it is rather thin in detail. St. George's Roman Catholic Chapel, Lake Mohegan, N.Y., is, as the writer says, neither English, French, nor Italian in type. We feel it might be a good deal better if it were. Wilfred H. Beach gives a good article on the "Problem of the Impossible Contract," which we also know of here.

The Architectural Record.

The month's number of the "Architectural Record" is mainly given up to houses, and contains articles devoted to : 1. The Small House. 2. The Working Man and his House. 3. Fireplaces. 4. Some larger Country Houses. The American houses which are most interesting to us are those based on the Colonial type, mainly or entirely constructed of wood, and of these we illustrate three typical examples. The type in which pilasters or columns run through the height of two storeys is strange to us here, but in the environment of the Southern States is appropriate and pleasant. We hope that future developments will be based more on these lines than any other, since they have a local character and appropriateness lacking in what are more obviously based on English precedents.

Building.

The July number of "Building" is given up to hospitals, of which it contains an interesting selection, showing as we should expect the much greater use of vernadahs necessary in such a climate. A soldier's home is given, which illustrates the defects of Australian design, though the plan is good. It is much to be regretted, though not greatly to be wondered at, that Australia should show a strongly marked provincialism in design. Most of the buildings illustrated might have been designed here between 1860-80, whereas corresponding American buildings show the results of the study of con-



BANK BUILDING, SIDNEY. OHIO.—Louis H. Sullivan, Architect. From the "American Architect."

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HOUSE OF GEORGE B. AGNEW, LEWISBORO', N.Y.—WILLIAM ADAMS, Architect. From the "Architectural Record."

temporary European design and the influence of Beaux-Arts methods. The great strides made by America are partly due to the strong Latin element, which modifies the Anglo-Saxon outlook, but also to the greater and more organised system of education in vogue. We would not wish to obtain the advantage given by the influx of foreign elements, but if Australia is to make architectural headway it must be by the means of better utilisation of educational facilities, of which we trust the appointment of Mr. Leslie Wilkinson is a sign.

Construction.

"Construction" contains illustrations of a new Masonic Temple at Toronto, by William F. Sparling, which is marked by delicacy and refinement. The Port Stanley Bath House and Cafetaria is also illustrated. The most interesting of its contents is an article illustrated by diagrams of a circular housing plan by G. J. Lamb, the assistant city engineer of Port Arthur, which shows an ingenious radial plan for a group of houses corresponding to a certain number of town lots within certain transverse and longitudinal streets. By describing a circle within the limits of the boundaries of these lots and giving over the square corners to form park land, and arranging the houses in a circle, every alternate house being either within or just without the circle, it is claimed that every house obtains direct sunlight, and there is a saving of 30 per cent. in cost calculated on complete equipment and services. It is proposed that the whole of the houses shall be heated by a plant in the middle of each group, roads are saved, and greater privacy obtained, while the connecting main road is taken through a continuous treed area. The idea is ingenious and worthy of study.

Art Publications.

The Burlington Magazine.

The "Burlington Magazine" contains an article on American Archæology, by Roger Fry, which is founded on three books recently published on the subject. The writer uses a picturesque and illuminating statement in deploring the destruction of the ancient monuments of Mexico, Yucatan, and Peru by the invaders. He emphasises the truth that from these monuments as compared with those of Greece, Rome, and Egypt we might have obtained a parallax "from which we might have estimated the movements of that dimmest and most distant phenomenon, the social nature of man." The direct influence of Aztec art on our own Western forms is very strikingly illustrated in some of the Spanish cities of Mexico, but it is but the dying effort of craftsmen working on lines dictated to them by another civilisation. Mr. Fry is greatly impressed by the striking similarities between Early American and Chinese forms, to which he thinks sufficient emphasis has hardly been given. Two short articles follow on some portraits of Drake and on an English Tapestry, the last illustrated by a beautiful example of seventeenth-century work, presented to the Victoria and Albert Museum by the Art-Collections Fund. Mr. Avray Tipping contributes a second article on the English furniture of the Cabriole Period, illustrated by some very interesting examples which include a fine chair of office surmounted by a gilt eagle. W. R. Lethaby in a ninth article on English Painters, gives an account of Master Walter, of Durham, King's Painter between 1230-1305, and Randolph Schwabe on six drawings by Rodin, and notes and smaller items complete the number.

Colour.

"Colour" gives a number of reproductions of the "advanced" type such as Thérèse Lessore and Raymond McIntyre. What can we say of Natasha, for example? Except that it is utterly crude and unlifelike it might be a child's early attempt at portraiture. "The Landscape," by Leonard Richmond, is good, and the "Portrait of Clara Butterworth in the Lilac Domino," by Faith K. Sage, charming: we should like to see a colour representation of it rather than of some of the more extreme examples given. The example under the heading of "Our Poster Gallery," by Stephen Chapman, is excellent and spirited, and "Canada's Answer," by Norman Wilkinson, is a good example of his work. "A Head Study," by A. Spencer Watson, which forms the cover, is a good and characteristic example of portraiture. We feel that the letterpress of "Colour" would be improved if the text were more closely associated with the illustrations given.

The Connoisseur.

"Treasure for Treasure," written before the armistice was brought about, suggests that reparation in land shall be exacted from Germany for the art treasures destroyed or damaged in France and Belgium, and the suggestion is a timely one. It would be but a small measure of justice if the contents of all the great German galleries were divided between France and Belgium, and we hope it will be done. W. Roberts writes on the John McFadden collection, the article being illustrated by fine examples of Romney, Hoppner, Raeburn, and others. English apostle spoons and their symbols are dealt with by John B. Sharman, who gives a diagrammatic plate illustrating the saints and their emblems. Kate Villiers Clive writes on "Old Porcelain and Pottery Cupids," and Frederick Litchfield on "Eighteenth Century English Furniture." This article is illustrated by examples of the design of Kent, from which we give two mirror-frames, the first of which was designed for the Prince of Wales (afterwards George III.), and the second is part of the David Garrick suite of furniture by Chippendale. Other minor matters and two fine colour reproductions of pictures by Gabé complete a very interesting number.

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Country Life.

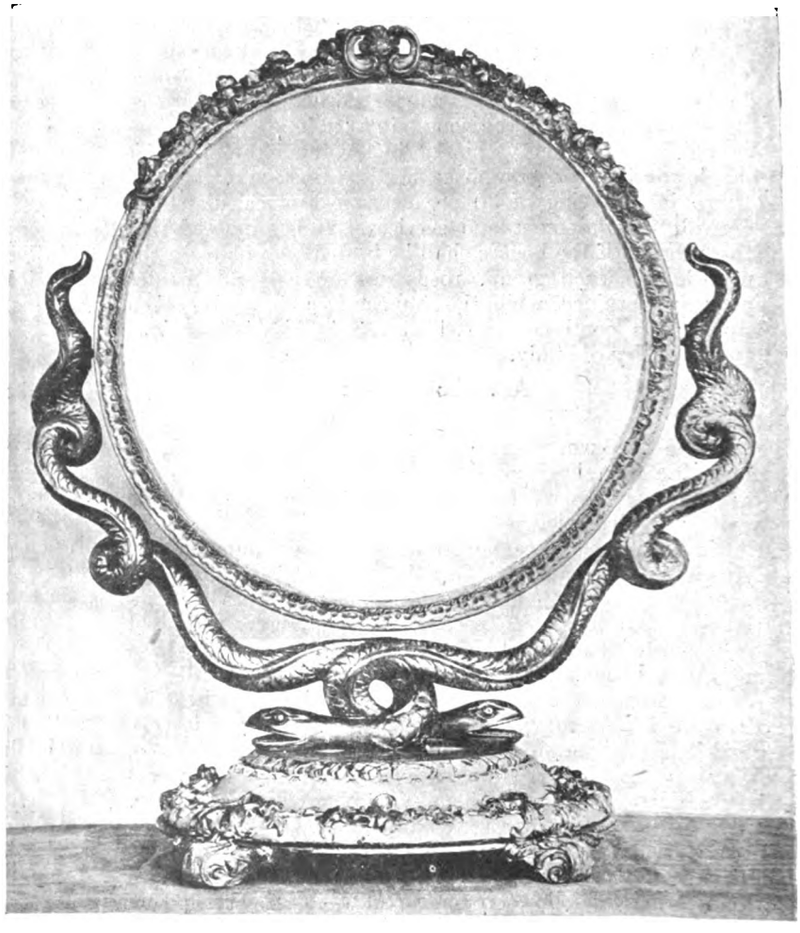
During the month "Country Life" has illustrated several good English houses, and two subjects of topical interest, "Versailles, the City of Nemesis," shown by a magnificent series of photographic views, and "Amorongen," the small château which at present shelters the Kaiser. In an article entitled "Wanted a Housing Policy," the writer seems to us to assume too much when it claims that because men have served in the war it is incumbent on the State to build houses for them. We cannot follow the logic of such an argument, and do not think sentiment should enter into discussion of the problem, which is an economic one. The cessation of building during the war has not caused a shortage but only accentuated it; the cause was the Finance Act of 1909. To our mind this Act should be first repealed and the laws of rating remodelled, and we should then see where we stood. This is the foundation of the housing policy we want from Government, and coupled with grants in aid of all schemes, private or public, on commercial terms should solve the problem. But "Country Life" has done, and is doing, a most useful work in attracting attention to the subject.

The Studio.

The "Studio" contains an article on modern miniatures illustrated by some examples in tone and colour; one of the latter a girl in grey, by Ethel C. Brisley, is a very successful attempt to reproduce the tone and quality of a miniature, while "The Jade," by J. Lancaster Brisley, is also well depicted. Most of the rest of the number is given up to "Leaves from the West of England Sketch Book" of A. E. Newcombe, which, though pleasant, are a little monotonous and wanting in character. A review of the exhibition of the Royal Glasgow Institute of Fine Arts is also given and illustrated.

"The Journal of the Royal Society of Antiquaries of Ireland." Vol. XLVIII. Part I. June 30, 1918. The President (Mr. Thomas Johnson Westropp) gives an account of five large earthworks in the Barony of Shelburne, co. Wexford. He regrets that so many of these remains are sacrificed in the attempt to make use of their sites for agricultural purposes, for which they are often unfitted, while funds are not available for their excavation and examination. The chief interest of the present volume is the remarkably full and interesting account of the Merchant Taylors' Gild in Dublin, by H. F. Berry. The Gild is reported to have received a Royal Charter from King John in 1207, but the earliest extant Charter dates from 1418. Numerous extracts from the masters' accounts are given from 1550 to 1800, an account of the three successive halls of the Gild, and an inventory of the prices paid for materials for the two latest halls, together with a list of the master wardens and officers from early times. It constitutes a valuable addition to the literature of a very interesting subject. The gilds of Dublin were hampered in their activities in later years by being purely Protestant bodies, which did not prevent the Merchant Taylors from making a determined protest against the union of the kingdoms, which, it declared, was "so dishonourable and so injurious to the rising prosperity of Ireland. It was necessary for the country to have an Irish House of Commons composed of Irish gentlemen of property, guided by love to the best of kings, affection for their native land, attachment to the British constitution, and to that happy connection which has subsisted between the two countries for 600 years." An article on the Viceroyalty of Lionel, Duke of Clarence, 1361-67, is given by Professor Edmund Curtis.





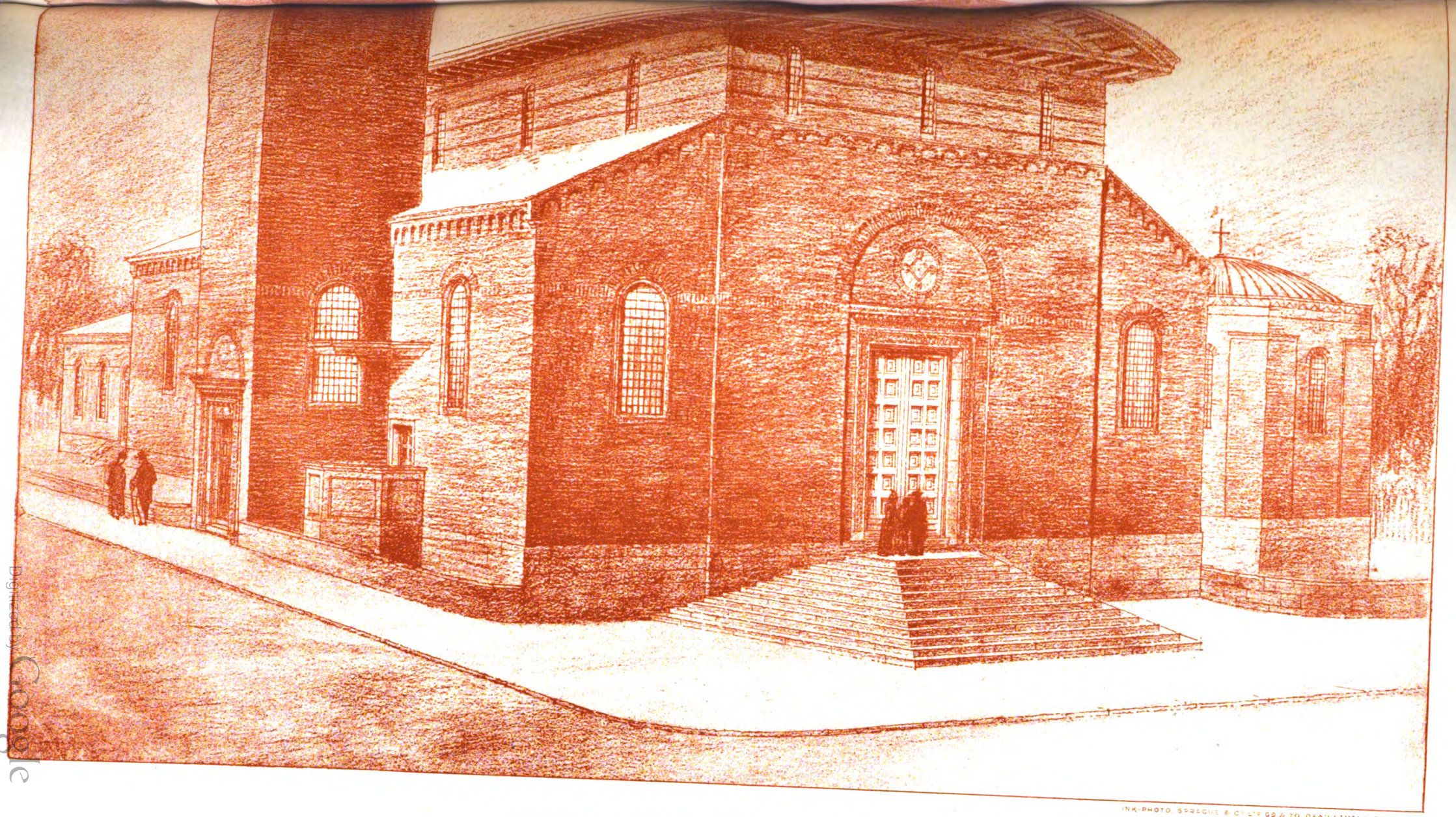
MIRRORS DESIGNED BY KENT.—By Permission of "The Connoisseur."

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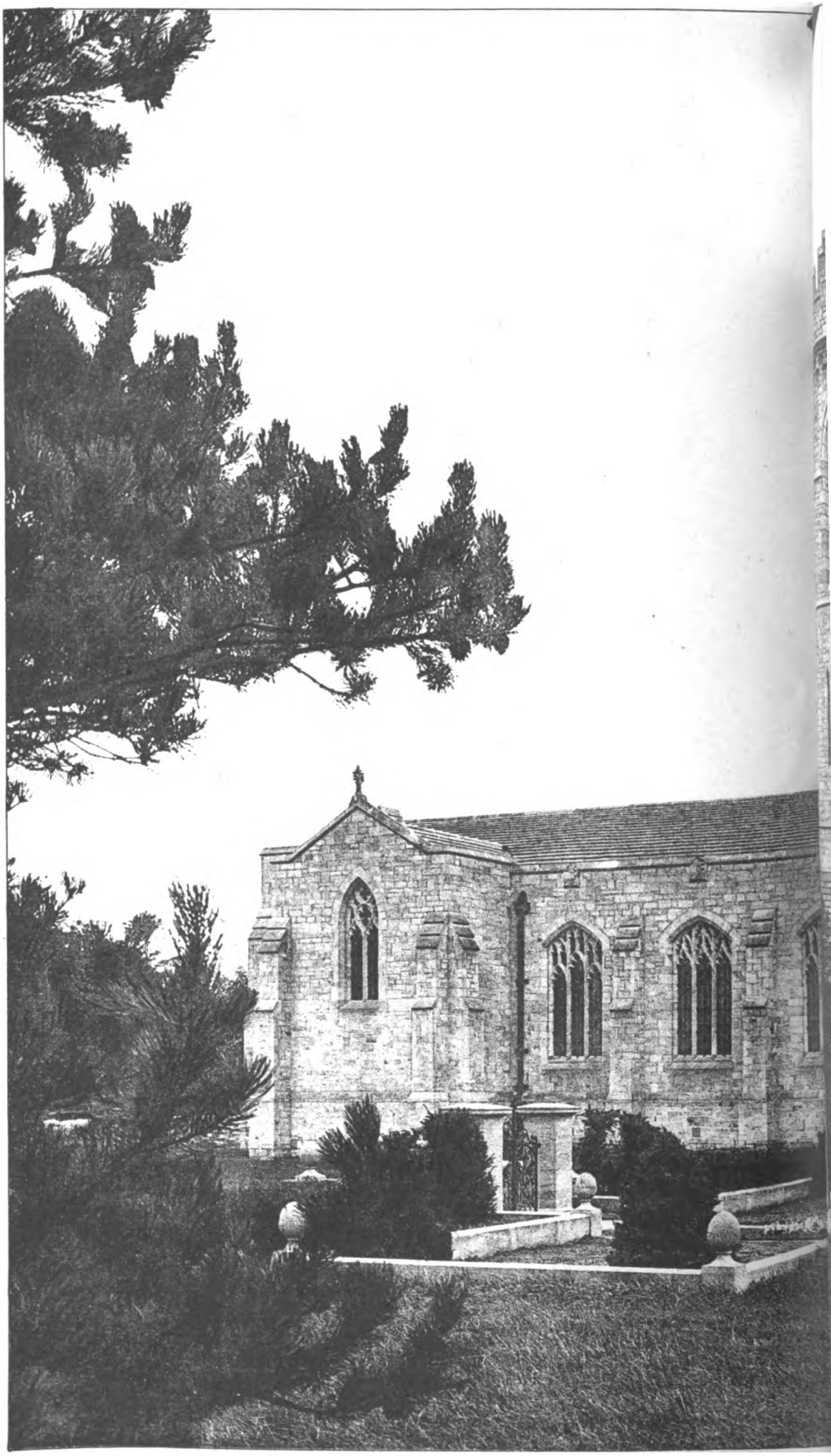
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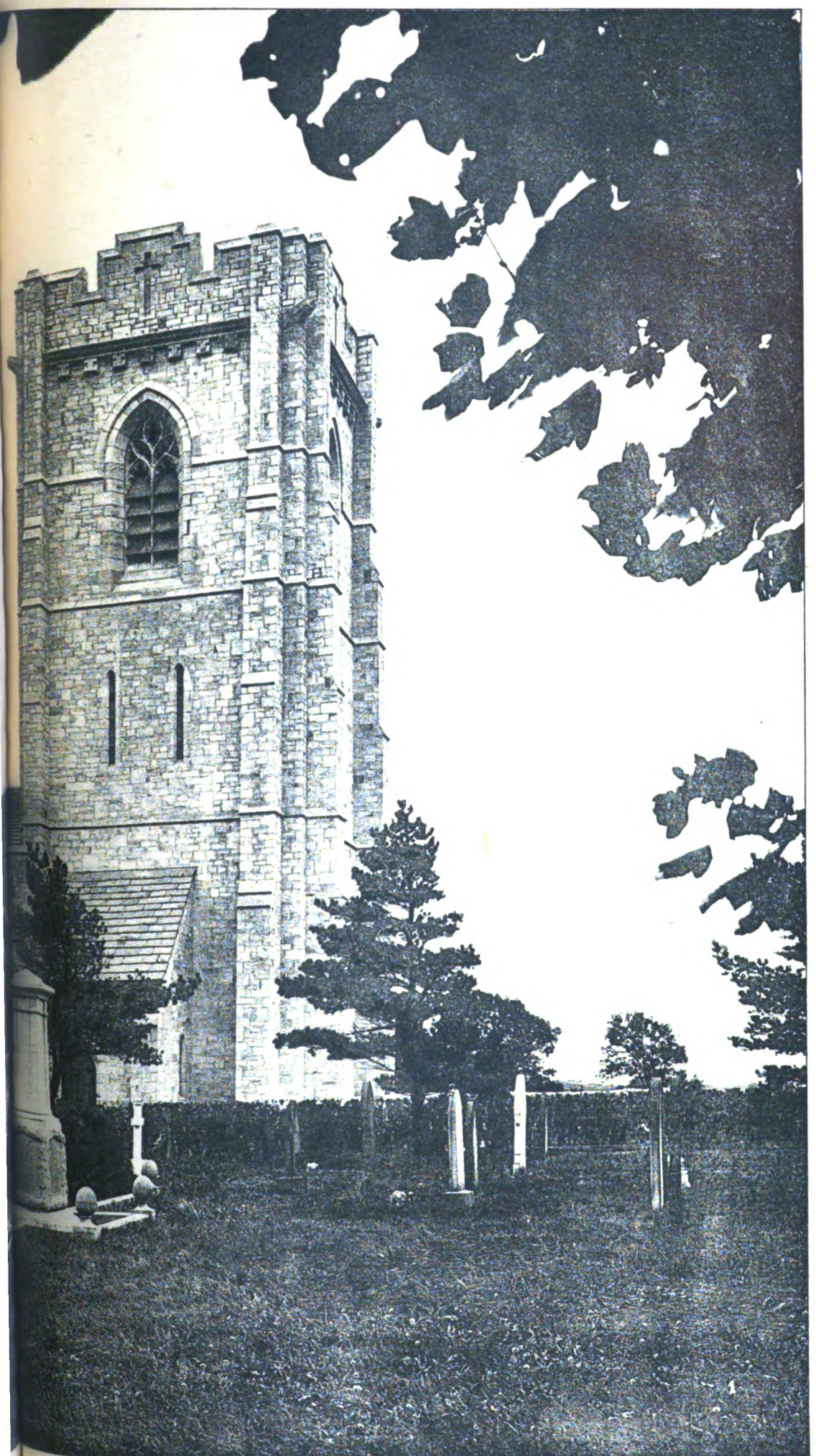
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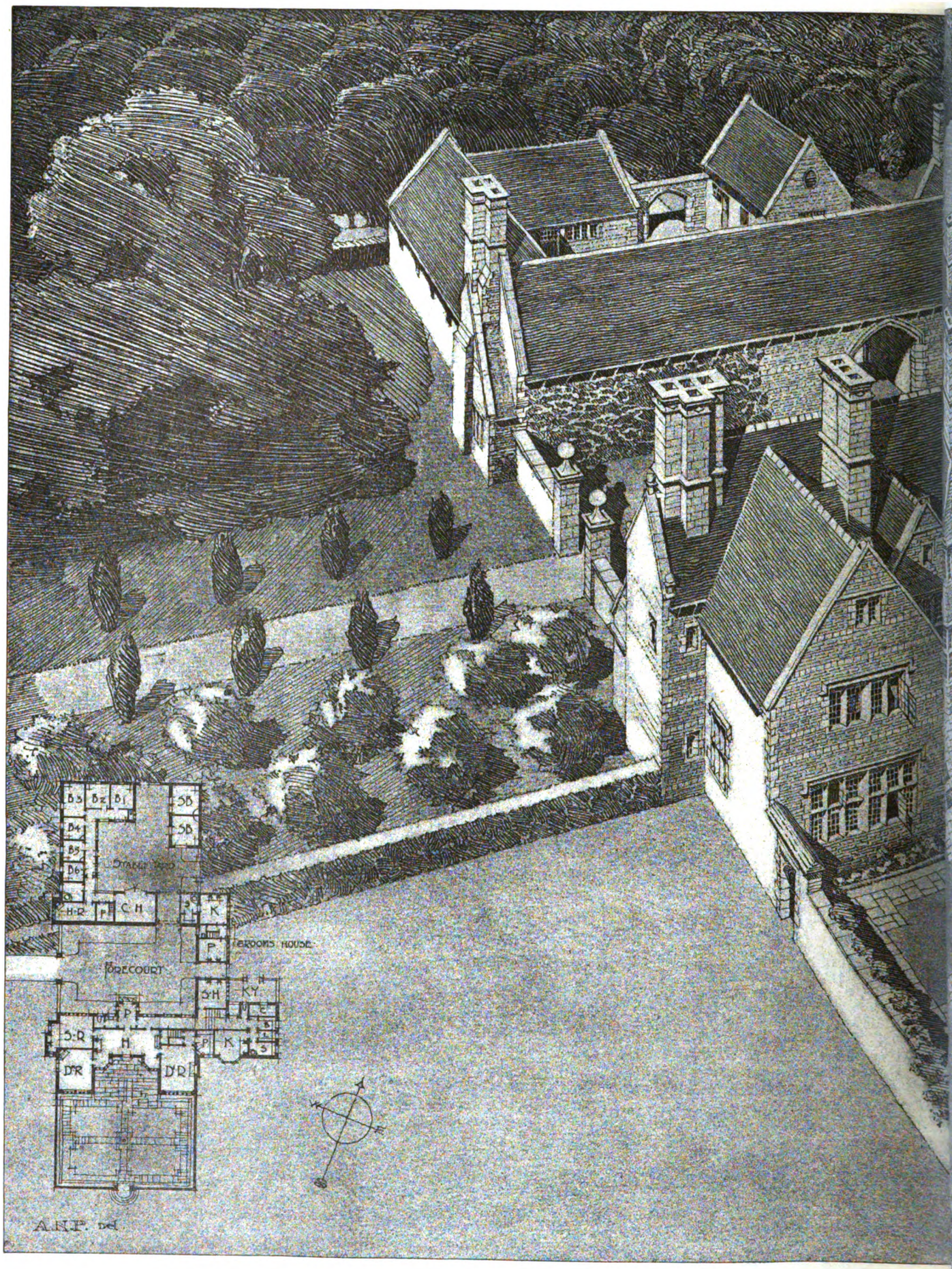
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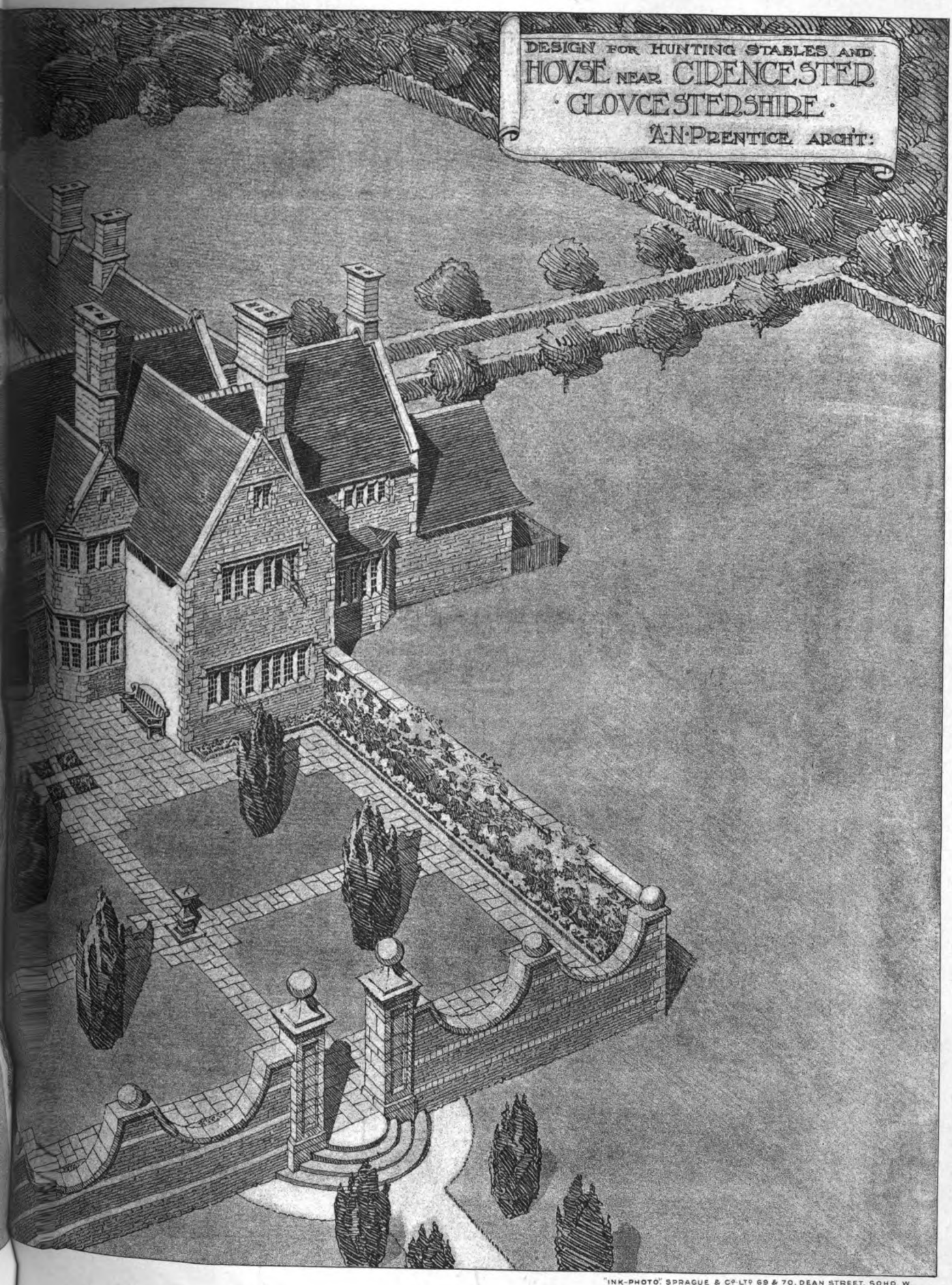
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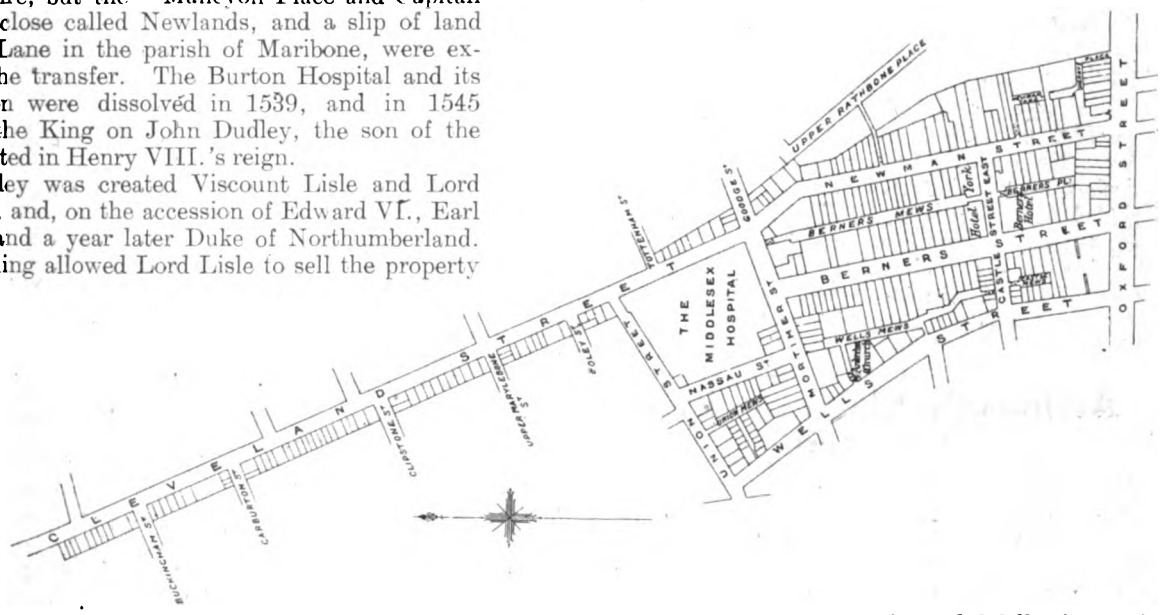
Books.

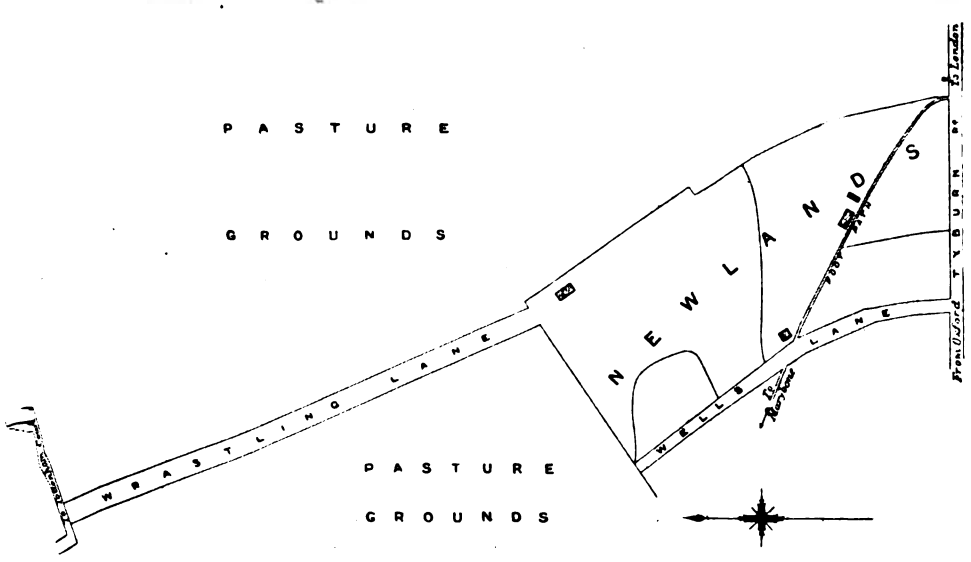
"A Short History of the Berners Estate, St. Marylebone." By John Slater, B.A. Printed by Unwin Brothers, Ltd., Woking and London, for private circulation.

WE wish that other surveyors to great estates would follow Mr. Slater's example, for in this excellent and interesting little book he gives a clear account of the history of a locality, and a number of such accounts covering the great London estates would add much to our knowledge of the past.

We give reproductions of the two plans with which the book is illustrated, which show the estate as it existed in 1654 and at the present time. Prior to 1546 the estate formed part of the possessions of the Old Leper Hospital of St. Giles, which probably acquired it by bequest or private gift in the reign of Edward I., part of the site being known as Newlands and the remainder as le Lane. The hospital was founded in 1101 by Matilda, the wife of Henry I., as a house for the maintenance of lepers, called the Hospital of St. Giles without London. The charter ordained that forty lepers, a clerk, a chaplain, and a messenger or servant were to be provided for, and the hospital became enriched by donations of land and houses, owning a large part of the parish of St. Giles as well as houses and tenements in nearly every parish in London. In Edward III.'s reign the custody of the hospital was granted to St. Lazarus of Burton, or the Hospital of Burton St. Lazar in Leicestershire. In 1537 the greater part of the hospital's property in St. Giles was granted to Henry VIII. in exchange for land in Leicestershire, but the "Mancyon Place and Capitall House," the close called Newlands, and a slip of land known as le Lane in the parish of Maribone, were excluded from the transfer. The Burton Hospital and its cell in London were dissolved in 1539, and in 1545 bestowed by the King on John Dudley, the son of the minister executed in Henry VIII.'s reign.

John Dudley was created Viscount Lisle and Lord High Admiral, and, on the accession of Edward VI., Earl of Warwick, and a year later Duke of Northumberland. In 1547 the King allowed Lord Lisle to sell the property to Wymond, afterwards Sir Wymond Carew, the ancestor of the Pole Carews. The estate have the originals of this deed of sale and all others until the property passed into the hands of the Berners family. The property remained in the hands of the Carews until 1563, when it was sold to Francis Downes for 930 marks. It passed out of the hands of the family by sale to John Graunge in 1571 for £300, and was parted with to Robert Lloyd in 1610-11. Held by a number of men for short periods, it was finally sold to Josias Berners in 1654, the plan given showing the property purchased. The estate at this time was a country farm, the fields running up to Oxford Street, then called Tyburn Road. It was then in the occupation of George Wells, who gave his name to Wells Lane, which led up to a block of fields. Marylebone was a small village clustered higher up the Ty-bourne, its only approach being by the winding Marylebone Lane, which marks the course of the old brook. William Berners first began developing the estate in the eighteenth century, and in 1738 let to one Thomas Haddle, for 99 years, a strip of 655 feet frontage to Oxford Street, 100 feet deep, with the exception of the space required for two streets which would correspond with Berners and Newman Streets, at a rent of 4s. per foot per annum. Haddle was to pull down old buildings and erect new ones, and Berners covenanted to construct a sewer from Wells Lane to Rathbone Place. The total annual rent received by the estate for the Oxford Street houses was £135 8s. till the last of the old leases fell in in 1838. The existing streets of the estate were laid out between 1750 and 1763, the first lease granted in Newman Street being dated 1750, in Charles, now Mortimer, Street 1759, in





Castle and Wells Street in 1760, in Berners Street in 1763, and in Sussex, now Nassau, Street in 1764. Building went on rapidly, for in 1773 there were sixty completed houses in Berners Street, twenty-three in Castle Street, thirty-five in Mortimer Street, exclusive of the Middlesex Hospital, ninety in Newman Street, and twenty-three in Nassau Street. Many of the older houses show the influence of the Brothers Adam in their ceilings and detail. A lease of 999 years was granted to the Middlesex Hospital in 1754. For some years the estate was a fashionable residential quarter.

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"Owen Jones" Prizes.

The Council of the Royal Society of Arts are now prepared to offer six prizes in each of the years 1919, 1920 and 1921 for the following subjects:—

In 1919.

Architectural Decoration.—Including Stained Glass, Mosaic for Walls and Floors, Plasterwork in relief and incised, Inlaid Marble and Stones, Lettering for Memorials.

Woodwork and Cabinet Work.—Including Carving in Wood, Ivory and Bone, Inlay, Chairs, Chests, Cabinets.

Textiles (a).—Including Tapestries, Carpets and Rugs, Moquettes, Floor-coverings (*e.g.* Linoleums and Floor-cloths).

In 1920.

Domestic Pottery and Table Glass.

Metalwork.—Including work in Precious Metals, Ironwork, Jewellery, Enamelling, &c.

Textiles (b).—Including Lace, Embroideries, Openwork, Dress Brocades, Dress Designs and Costume Accessories (including Fans), Printed Fabrics for Dress.

In 1921.

Book Production and Ornamental Leatherwork.—Including Covers and Lining Papers for Bookbinding, Title Pages, Lettering and Printing, Posters, Trade Labels and Advertisements.

Wallpapers, and other Mural Decorations.

Textiles (c).—Including Damasks, Brocades for Decoration and Furniture, Printed Fabrics for Hangings, Vestments and Church Fabrics (including Altar Frontals, &c.), Figured Velvets, and Figured Muslins.

Each Prize will consist of a bound copy of "The Leading Principles in Composition of Ornament of Every Period," from the "Grammar of Ornament," by Owen Jones, and the Society's Bronze Medal.

The competition is limited to students of Schools of Art. No competitor may send in more than a single design for each of the above-named manufactures, but that design may be accompanied by one or two working drawings or other illustrative sketches.

A sample of manufacture executed from the design may be submitted with or in substitution for the original design; but every submitted work must be approved by the master or other authority of the student's school

Architect's Claim of £1,160 for Fees.

In the King's Bench Division on Friday, November 29, Mr. Justice Roche heard an action in which Mr. James Seabright Gibson, architect and surveyor, of 5 Old Bond Street, claimed from the Davidson Aviation Company fees amounting to £1,160 15*s.* in respect of a proposed extension of the defendants' premises at Hammersmith.

Mr. Compton, K.C., with Mr. Morle, appeared for the plaintiff, and Mr. Disturnal, K.C., with Mr. de Herbert, for the defendant company.

Mr. Compton, in the course of his statement of the plaintiff's case, said that he was claiming for professional remuneration in connection with a proposed extension of the defendants' works in the Hammersmith Road, a scheme which, however, was abandoned because the Government would not sanction the outlay as it was beyond the limit of £500. The defendants by their pleadings denied the retainer, but made payment into Court with a general denial of liability. His submission for the plaintiff was that the facts would show clearly that the plaintiff was employed. The payment into Court was £345 5*s.*, but the plaintiff's claim was based upon the recognised professional charges in accordance with the rules of the Institute of British Architects, of which plaintiff was a member. He was consulted first in regard to the site adjoining the defendants' works in the Hammersmith Road, on which it was proposed to construct an extension of the works. He told them he thought the value of the site was £3,000, and he was then asked to prepare a complete scheme for the proposed new works. He carried out a complete survey of the whole site, and in respect of that he had only charged the nominal figure of twelve guineas, and as to that claim the defendants had paid five guineas into Court with a denial of liability. Subsequently plaintiff submitted to the defendants plans and specifications for the proposed new buildings. A bill of quantities was got out for submission to the Air Board, and for that the defendants had paid £100, which they would not have done (said counsel) had they not employed the plaintiff to get the estimate. Messrs. Selby & Saunders estimated the cost of the new premises at £38,930, and in that figure was included £1,300 for surveyor's fees, for submission to the Air Board.

Mr. J. S. Gibson, the plaintiff, was called, and gave evidence bearing out counsel's statement. He said that in the early part of January of last year he was asked to go to the defendants' premises at Hammersmith, and when he went he was consulted as to the value of the site adjoining, and he was subsequently asked to get out plans and specifications. Mr. Gordon, his partner, spent two days on the survey of the land and buildings thereon, after which he (witness) proceeded as rapidly as possible with the drawings necessary for carrying out the defendants' scheme.

A great deal of evidence was given on both sides as to the prevailing custom upon which architects made their charges generally, and particularly in relation to the plaintiff's claim.

Mr. Disturnal said the defendants did not dispute that the plaintiff was entitled to be paid a fair remuneration for what he had done, and the whole question was what he had really done in accordance with instructions. He was undoubtedly retained to do something, but not all that he said he was engaged to do, especially in regard to the second scheme. He knew, said counsel, that the defendants were not in a financial position to carry out that second scheme without Government aid.

Mr. Morle, replying for the plaintiff, submitted that the proper method of remuneration was upon a percentage basis. In such cases as this it would be impossible to adopt a day-work basis, and that being so the question was what would be a reasonable percentage under the circumstances. The steps taken by the plaintiff had been taken upon express instructions.

His lordship, in giving judgment, said that there had been some conflict of evidence as to what took place when the arrangements were made, but he was inclined to accept entirely the evidence of Mr. Gibson. The value of, for want of a better term, he would term an architect's goodwill had been undervalued by the defendants' case. As to the first scheme he thought a percentage basis could not be adopted in making the charges; it would have to be upon the amount of work done, and his opinion was that the proper charge to be made by the plaintiff would be 100 guineas, and that amount he would award. The second scheme was a large one: it was to fill the vacant ground with new buildings. The defendants said that their instructions were simply to give an estimate of cost, but that was wrong, as detailed plans and estimates were got out, and he found that the plaintiff did the work at the request of the defendant company, and brought it up to a point when it could be submitted to the Board as a detailed scheme. That was not quite so much as the plaintiff said as would entitle him to charge 2½ per cent. on the estimated value. It was, however, substantial work, for which it was submitted 250 guineas would be sufficient payment. He thought the work did fall substantially short of that which would entitle plaintiff to claim 2½ per cent., and that 1½ per cent. would be nearer the mark, but he did not adopt that as an exact figure. Looking at the value of the services, which extended over a month or six weeks, he thought he ought to be paid £500 for the second scheme. This, with the 100 guineas, would make £605, for which amount he gave judgment.

Judgment was accordingly entered for the plaintiff for £605, with costs.

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FOR TRAMCAR DEPOTS, GARAGES, GENERATING STATIONS, BOILER HOUSES, ENGINE SHEDS, WAREHOUSES, AND ENTRANCES GENERALLY.

SOLE MANUFACTURER: **Arthur L. Gibson,**

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Private versus Municipal Housing.

We give below a letter which has been sent to the members of the Nottingham Corporation by the Nottingham and District Property Owners' and Ratepayers' Association, which very reasonably calls attention to the weak points of many of the proposals now being advocated:—

Nottingham's Housing Scheme.

Sir,—The executive of this association, and its members generally, are not less desirous than the Housing Committee of seeing that more and better houses for the people of Nottingham are provided.

The house-building members of the Association have hitherto provided practically all the houses in Nottingham, and, up to the passing of the Finance (1909-10) Act, 1910, to an extent enormously in excess of the demand, so much so that in 1911 it was estimated there were between 5,000 and 6,000 houses empty. In the ten years 1901-1911, the population increased by 20,189; during this period there were built 11,634 houses of a greatly improved character, although, on the basis of five persons per house this was in excess of normal requirements. During the four years ending March 1915, 1,652 houses were built, an average of 413 per annum.

Admitting there is some demand for new houses in the city, my committee do not agree that the present needs are anything like 1,000 houses. In view of the possibility of the closing down of huge munition works, it is probable that many houses now occupied by munition workers temporarily resident in the city may shortly become vacant. Until the extent of the financial assistance to begin the various forms of private enterprise, as practically promised in the Local Government Board circular of July 28, 1917, is known, the Housing Committee are not entitled to assume that private enterprise will not be found willing to build the houses which are required.

The object of this communication is to secure, if possible, the postponement of the passing of the Housing Committee's Report which is to be presented to the City Council at their meeting on Monday next, so that the facts and circumstances may be more thoroughly considered by the ratepayers, and by various Associations having expert knowledge, as in Birmingham, Manchester, &c.

The ratepayers of the city should bear in mind that the scheme will probably involve an expenditure of £500,000, and that the houses—if let at economic "inclusive" rents—cannot be let at less than 15*s*. per week; if let at less than this, the occupants will be subsidised at the expense of the ratepayers generally.

In conclusion, may I suggest that the report be received, and its full discussion postponed to a special meeting of the City Council.

Geo. M. Moore, Secretary.

Correspondence.

[The Editor will not be responsible for the opinions expressed by Correspondents.]

A National Memorial and the Housing Problem.

Sir,—It may be assumed that the new Parliament will take an early opportunity of considering what form a national memorial should take to honour not only those who have fallen, but also those who have taken part, in the great struggle of right against might.

May I venture to bring before your readers a scheme which may be thought worthy of some consideration? It seems to be generally agreed that the memorial should be of a practical as well as of a monumental character, and this practical form cannot, I think, be better shown than by taking a wide and generous view of a question now before the public, namely, the housing problem. The fact that it is necessary to provide at once 300,000 houses for the accommodation of the working classes shows how inadequately they were housed before the war, and proves that the nation must take immediate steps to rectify this deplorable state of affairs. While the majority of the homes are doubtless needed for country districts, the fact remains that the slums in London are a disgrace to the community and must be abolished and decent residences for the working classes take their place. The doing of this would be a practical side of the memorial project.

I venture to suggest that the area covered by Charing Cross Hotel and Railway Station, together with Villiers Street and perhaps Buckingham Street, would form a site for a national memorial worthy of the nation and the cause.

It would, of course, be necessary to remove the railway station to the south side of the river. This would give the opportunity of erecting a much-needed bridge. It will be remembered that when the station roof collapsed in 1906 many proposals were made to this effect. I made myself a proposal in my opening address as President of the Royal Institute of British Architects, and which was illustrated in a weekly paper. The railway company, however, objected, chiefly on the grounds that their suburban traffic would suffer. This could now be obviated by continuing the Tube Railway from Aldwych to Charing Cross, and thence to the south side of the river.

A new bridge (why not St. George's Bridge?) should, of course, form a distinctive feature of the memorial, and the southern end of the bridge might have a distinctive feature in the form of a memorial as a tribute to all our Allies.

But however magnificent a form be given to the memorial I see no reason why it should not be combined with projects of a utilitarian nature, and I venture to think no project can be more worthy of consideration than the housing scheme to which I have referred above.

On the south side of the river is a crowded district composed mainly of small unhealthy houses, homes of the working classes, and nowhere is it worse than by the riverside. There could be no better point of beginning a housing scheme than here.

I would suggest that the Government should acquire a strip of property—say from the site of the London County Hall now in course of erection, as far east as Southwark Bridge to a depth of 300 or 400 yards, on which a beginning of a great housing scheme could commence, a housing scheme not only for those who could pay a rental of £25 per annum for a flat, but also for those who could afford a higher rent, extending perhaps to £100 per annum. There might also be space allotted for buildings other than residences, such as a Shakespeare National Theatre, the London University, together with students' quarters, &c., &c. The residences for the working classes would, of course, come under the Government proposals in their housing scheme.

With a structure of a grand monumental character emphasising the entrance to the bridge, a similar emphasis on the southern side, with an embankment to St. Paul's Bridge, I think it possible that a great monument of the great war could be consummated.—Yours, &c.,

Thos. E. Collcutt,
Past President of the Royal Institute of British Architects.

Architects' Demobilisation Committee.

Sir,—All communications relating to the demobilisation of architects should be addressed to the above Committee at 35 Bedford Square, and not, as stated in the Government notice, to the Architectural Association. The Demobilisation Committee is a Sub-Committee of the Architects' War Committee, which for its own convenience and by courtesy of the bodies concerned uses for different purposes the premises of the Institute, the Architectural Association, and the Society of Architects.—Yours, &c.,

Henry M. Fletcher,
Chairman, Architects' War Committee.

The Runcorn District Council has decided to build 150 working-class houses at Weston Point, near Runcorn, 100 at Grappenhall, near Warrington, 100 at Helsby, 30 in the Frodsham district, and 30 in adjoining villages.

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THE ARCHITECT
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An Architects' War Memorial.

ALL recognise the very great services which have been rendered to the nation by young professional men, many of the most promising of whom have given up their lives in the service of the country, leaving contemporary art the poorer. A great gap has been made among those whose powers of design had been proved, and many who could have looked forward to great and successful careers are no longer in our midst. The majority, it is true, will return to their work; we hope to find that they have lost little by the interlude of the war and have gained in that knowledge of life and of men which is a more valuable asset than we often realise.

Of the two other classes who remain with us, the men who were too old to serve and those who were too young, the first have in many cases done their best life's work and cannot be expected to respond to the full to the new influences which are changing the face of the world; the second are more in need than they ever were before of the best educational equipment for the complex work of their lives, and we may take it that the various architectural schools will possess an influence and importance that they have never had in the past, and that the best service that can be rendered to the profession is to see that it is equipped with the means and opportunity for training the younger men without which the promise of the future may be jeopardised.

Among our architectural schools there is none which has in recent years done better work than the Architectural Association, who in their present headmaster have secured not only an architect of exceptional brilliant gifts, but, what is very much rarer, a man who is able to impart knowledge and inspire enthusiasm as we believe no one else has been able to do in our generation. It is doubly important that such an asset should be made use of to the full, for it is unlikely that any one else could do the work which Mr. Atkinson has proved he is capable of undertaking. The Association is universally popular, and has for years proved its vitality and energy, and has now reached the culmination of its influence as an organising and educating body. The R.I.B.A. examines but does not teach, and its members too frequently seem to have reached a condition which may be described as lithargic and philosophical, while the Association is more and more coming to the front as a living centre of effort and enthusiasm which will stand us in good stead in the future.

Unfortunately, like all voluntary combinations, the Association is much handicapped by the lack of adequate means: it is now in debt to something like the extent of £1,500, and it has been suggested that this amount should be raised within the ranks of the profession as a memorial to the younger men who have fallen in the country's service.

But this which can be done by architects is but a small part of what should be effected if possible. Plans have been drawn up for the erection of adequate studios and other accommodation in the rear of the new premises in Bedford Square with the object of devoting the front part of the premises to club and other social objects, and we believe the total cost of the whole may be anything from £10,000 to £15,000. We are afraid that the raising of such a sum within the ranks of a profession which has been more badly hit than any other by the war is an impossibility for some years to come.

Would it not be possible that some among those who, like Lord Leverhulme and Lord Plymouth, understand what architecture means and who have shown their practical sympathy with it might help the cause by endowing the Association with funds to carry on its work in an adequate manner? We mention two names which occur to us at the moment, though there are many others who take a keen interest in architectural matters. Port Sunlight and Bournville both owe their origin to men who realise the importance of the influence of design on the lives of the people. The late Marquis of Bute was Burges' most munificent patron, and without him we should have lost an example of Burges' appreciation of mediæval art. Such men know the necessity for education in matters they understand and love, and might possibly help in what is in reality, to use a current phrase, of "national importance."

History shows us that great families like the Medicis might have sunk into the background of past history if their qualities as rulers and organisers had been their only claim on posterity. It is as great and liberal patrons of the Arts that they have secured a fame which renders their memory immortal while history exists, and we cannot doubt that to-day men exist who are no less patriotic or enlightened than the old rulers of Florence, and who recognise the claims of an aristocracy of culture as being as important for the welfare of the community as anything which can be gained by any other manner of serving humanity.

We therefore hope in conclusion that means may be forthcoming which will enable the Association to carry out the education of coming generations on lines which will justify its motto, "Design with Beauty, Build in Truth."

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Illustrations.

EASTRIGGS HOUSING SCHEME

Notes and Comments.

Our Competition.

We have received an excellent response to our competition for a new title for "The Architect." Approximately 60 designs have been sent in, and the number of really excellent ones is so large that it will be a matter of considerable difficulty to arrive at a final choice. In a few weeks' time we shall illustrate 18 to 20 of the best designs submitted, and shall announce our choice. We hope to arrange an exhibition of all the designs received at the Architectural Association, and meanwhile tender our thanks to those who have given us the benefit of their skill in design. We feel it is a pity that we only publish one journal and require one heading for it, as we should like to be able to perpetuate several of the designs received by publishing them week by week.

The Carpenters' Company Trades Training School.

The annual report on the work of the Trades Training School of the Carpenters and Allied Companies was read by Mr. Frederick Sutton, J.P., at Carpenters' Hall, on Monday night, the Master, Mr. Ernest T. Pullein, being in the chair. The Director, Mr. Sheriff Banister Fletcher, then read his report on the work at the schools, the attendance at which has now reached pre-war level The number of students in the electric wiring classes has risen from 15 to 59, and the usefulness and popularity of the training given by the Companies has again been strikingly illustrated by results. Sir Aston Webb distributed the prizes, and made a most excellent and happy speech, which was greatly appreciated by all who heard it. After telling the students of his experiences in life, and emphasising the importance of hope and memory he described the points which a bricklayer and joiner might notice in a visit to Hampton Court, and very happily expressed his sympathy with and affection for the rising generation. He had, he said, always been surrounded by younger men, who came to see him in after years, and he supposed it was this association which made him feel young himself, in spite of advancing years. No one has worked more strenuously for public causes than Sir Aston Webb during the difficult and troublous times which are now happily past, and no one has shown more faith in the final issue than he has, and we hope he may live long to see the full tide of our returning national prosperity. After the usual vote of thanks to the various speakers, the meeting terminated.

Paint and Prices.

At the annual meeting of the Associated Paint, Colour and Varnish Manufacturers of the United Kingdom the Chairman reported to the Council that as a result of interviews which various Committees have had with the Controllers of raw materials, the Council have come to the conclusion that there will be no reduction in the prices of our manufactures for the next six months. Some prices, notably that of white lead, have even advanced recently. The Federation represents almost every *bona fide* manufacturer of paint and varnish in the United Kingdom. It is to be hoped that there will be no attempt to raise the price of builders' materials unduly, for if this happens it will not only keep back a great deal of work which would otherwise be put in hand, but will possibly affect the interests of the merchants and sellers of building materials as it must inevitably restrict the sale of their output.

The Ministry of Reconstruction's Pamphlets.

We have received two pamphlets from the Ministry of Reconstruction, the first dealing with Raw Materials and Employment, which we propose to deal with next week, the second a Guide to Work and Benefits, which we will also notice. Besides these notices dealing with demobilisation have reached us from the same source, but these we cannot usefully comment on as they are best dealt with elsewhere. We hope that the demobilisation of professional men, and especially of architects, will be dealt with without delay, as these are classes who have suffered most heavily by their enforced absence from their customary occupations. It is far easier for the manual workers who return to civil life, for men in the professions will in many cases practically have to start again under very different circumstances.

Professional Slander.

We notice a reference to a forthcoming action for slander in a provincial town, which we must not allude to as it is *sub judice*, but it reminds us of the ancient rules of the Coopers' and Smiths' Company of Newcastle-upon-Tyne, which enacted that if a member said another was a fool he was fined 3*d*. If he went further and called him a rogue it cost him 1*s*., but if he stated that a brother was "a botcher and would never have a straight head in his hat" it cost him 6*s*. 8*d*. The apprentice of a member of the Merchants' Company in the same town was, in 1657, sent to the apprentices' prison there to be strictly kept, with 2*d*. in bread and one quart of small beer per diem, until further orders, his offence being that he called a member's wife "an idle woman and a base slut." We confess to a wish that the law of libel might be altered and amended, for as it stands at present it is often a bar to honest and useful criticism, and the legal axiom, "The greater the truth the greater the libel," is not an encouraging one for the layman whose first act as a witness in the Courts is to swear on oath to state "the truth, the whole truth, and nothing but the truth," which one sometimes feels it would be quite a good thing to be able to state outside the walls of a Court of Law.

A Cinema Competition.

We give in our advertisement columns an invitation to architects to take part in a competition for a Cinema Theatre at Grange-over-Sands, a fee of £40 being offered for the accepted design. The advertisement is badly worded, but we presume that what is meant is that the fee of £40 is a premium over and in addition to the usual professional charges which are made by an architect. If this is so the premium, though small, is possibly adequate if the Cinema is a small building, but if the promoters imagine that £40 is adequate payment for professional services connected with the erection of a Cinema Theatre they are entirely wrong, unless the cost of the building is to be limited to £800. Even in such a case they would be putting architects to the trouble of competing for an absurdly small building and will find that few if any will accept their "liberal" terms. But unless our first interpretation is correct the competition will probably be barred by the R.I.B.A., and no one of any standing or position will aid the promoters by giving them the use of their skill and experience.

The Land Union's Manifesto.

We give on page 330 the manifesto of the Land Union, to which we have been asked to give publicity. Though it deals with political issues we feel it is entitled to a place in our columns as it also affects the bed-rock of all building, the security of property owners in the exercise of their reasonable rights. Unless these important classes feel they have the protection of the law and of public opinion, building in any community would tend to cease, with disastrous results for both capital and labour.

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The Surveyors' Institution.

A PAPER dealing with the Acquisition and Valuation of Land for Public Purposes was read at the Surveyors' Institution on Monday, by Mr. John D. Wallis, member of Council. The main recommendations are directed to a proposal for a new tribunal and procedure to supersede the present method of Private Bill legislation. The subject which was dealt with is defined by the title of a paper read to the Law Societies of Manchester and Liverpool, viz.: "The Reform of Private Bill Legislation and its Decentralisation."

The terms of reference to the Committee were:—

"To consider and report upon the defects in the existing system of law and practice involved in the acquisition and valuation of land for public purposes, and to recommend any changes that may be desirable in the public interest."

The Chairman of the Committee is Mr. Leslie Scott, K.C., M.P., and the members are all men of considerable experience in the particular matters referred to them.

The Committee point out that a particular application for power to take land cannot be decided on apart from the merits of the whole scheme or undertaking in respect of which the land is wanted. It follows, therefore, in their view that their reference includes the general subject of the Acquisition of Statutory Powers so far as land is concerned. The First Report deals accordingly with this subject, and in a Second Report the Committee will deal with the question of valuation of land.

It is necessary that we should bear in mind the reasons for which the Committee were appointed, namely, to deal with the subject from the point of view of the problems of Reconstruction after the War. The Committee put this in the forefront of the report; they consider it desirable "to envisage clearly and comprehensively the general situation which will arise." They contemplate the need for large schemes for providing housing accommodation, extensive proposals for the development of agriculture and forestry, for reclamation or drainage of land, for provision of transport and access to natural and mineral resources, for electricity and water power, for the development of aviation as well as for ordinary purposes of national defence and administration.

The question of Private Bill procedure has been considered by another Committee, "The Acquisition of Powers Sub-Committee of the Reconstruction Committee," presided over by Sir George H. Murray, G.C.B., which made the following recommendations:—

(*a*) The introduction of legislation in order to bring up to date the several Acts conferring general powers on local authorities and powers for carrying out public utility undertakings and their periodical revision;

(*b*) The consolidation of local Acts;

(*c*) The extension of the Provisional Order system so as to enable powers to be given by Provisional Order similar to those which have been given by Special Act under similar circumstances;

(*d*) The granting of powers for the compulsory acquition of water rights by way of Provisional Order;

(*e*) The extension of powers to make Orders not requiring confirmation by Parliament;

(*f*) The grant of powers enabling Departments of State to make rules for regulating procedure in connection with Provisional Orders;

(*g*) The appointment of a Joint Committee of the two Houses of Parliament to consider questions affecting the procedure to be prescribed in relation to Private Bill legislation generally.

The Committee recommended that local authorities requiring land for schools, hospitals, &c., should be able to acquire powers by orders of the Local Government Board after an inquiry without requiring Parliamentary confirmation.

Also that time and money would be saved if opposed Bills were dealt with by a joint committee of both Houses instead of by two committees.

The true criticism of Private Bill procedure is, that whilst it is suitable for large and important applications for statutory powers, and would be improved for such purpose by reducing the cost and simplifying the procedure, it is entirely unsuitable and too costly for applications for land by small local authorities and others, for purposes which, however desirable and necessary, are not sufficiently large to justify the time and expenditure required for a contest the committee-rooms. If this is admitted as applied to pre-war conditions, it will certainly follow that in connection with the compulsory acquisition of land for purposes of reconstruction some more simple procedure is necessary.

Under the proposed new arrangement the chief commissioner would receive a substantial salary proportionate to the important functions assigned to him. He is referred to by Mr. Dixon H. Davies as holding a position at least equal to that of a High Court judge. It is not proposed that the other commissioners should be paid unless it were found necessary to do so, but it is intended that their office shall be one of great honour and responsibility.

The commissioners would be men who could take a broad view without falling into stereotyped methods, and should be free from any personal, local, or departmental interest. The co-opted commissioners, not being members of either House, would be suitable persons with general experience of affairs, qualified to form a common-sense judgment; men of similar standing to Members of Parliament, such as ex-Members of Parliament, chairmen of county or borough councils, chairmen of Quarter Sessions, public-spirited men of high standing in the professional or business world, members of the trade union congress, social workers with knowledge of affairs, and retired public servants with general administrative experience, but excluding departmental officials and experts as such.

This general body of commissioners, including Members of the two Houses of Parliament and co-opted persons of the class indicated, would form a panel from which members will be drawn to hear and decide applications for powers. The chief commissioner would no doubt guide the general policy and two members of the panel of chairmen would attend with him at the office of the authority in rotation, to supervise the normal arrangements and to discharge the ordinary duties of the panel of chairmen. The actual responsibility for decisions would be delegated to small committees of one, or three, or more members chosen from the panel. These small committees would be the "sanctioning authority" in each case, and the decision given would be the decision of the individual commissioners who inquire into the proposal. The tribunal is intended to be as nearly as possible analogous to the present Parliamentary Committees, and should be regarded as a sub-committee of Parliament, but subject to a limited right of appeal, which I refer to later, the decision of the commissioners would be final. It would not be submitted for confirmation to the general body of commissioners or to Parliament. The Committee emphasise in the Report the fact that the success of the scheme would depend upon the choice of good and suitable men. Much would depend upon this, because, as we shall see, the powers of these small committees of selected commissioners would be equal to those now exercised by Parliament itself.

The sanctioning authority would devise their own procedure, but in order to illustrate how the scheme would work in practice, the Committee indicate the main lines of a specimen procedure which is based on the following broad principles:—

1. The procedure should be simple and expeditious;
2. Should allow of schemes being brought forward at any time of the year;
3. Should provide for a decision without delay;
4. The inquiry should be held publicly in all cases, and locally in most cases;

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5. The decision should be final;

6. The Commissioners should have full discretion as to costs.

The right to introduce a Private Bill would disappear in all cases of applications for statutory powers to take land, promoters would have to apply to the new authority. The sanctioning authority would have the right to refer a scheme direct to Parliament when first lodged or at any time if on reference to the three chairmen they agreed that the issues involved could be more reasonably dealt with in a private Bill.

The control which Parliament would exercise would therefore be very limited and would appear to lie chiefly in the power of the Joint Selection Committee to appoint the chairman and members of the authority. There would be a general supervision of questions of principle by the three chairmen, and direct control by Parliament in those exceptional cases which the three chairmen decided should go before Parliament on "a question of policy." In all other cases Parliament will dispense with any direct control, and the decision of the commissioners would be final.

The authority would be an enabling authority and a judicial authority, partly legislative, but in no part executive. It would have "to hold evenly the balance between private right and the public need," and to deal with applications for compulsory powers in regard to acquisition of land by—(1) Local authorities; (2) Government departments; (3) Private companies and individual promoters.

The last named division of the subject is a very important one. The proposal of Mr. Leslie Scott's Committee is that all applications for statutory powers, which include the compulsory acquisition of land, are, in the first instance, to be addressed to the sanctioning authority, who would deal with a scheme in all its aspects just in the same manner as a committee on a Private Bill. They would give such other powers as were necessary for the proper execution of the scheme, including finance and the authorisation of any loans involved. The powers, as summarised by Mr. Dixon H. Davies in his paper, would include "all subjects, no matter how novel, how large, or how small, so long as they involve as part of the proposal some interference with private property in land."

The Committee propose that the orders of the sanctioning authority should be open to review by a Court of Law. It is questionable whether the sanctioning authority would have the power and authority of Parliament or whether it would have power to amend or repeal clauses in private Acts of Parliament or to grant statutory powers to railway companies and corporations. The new authority should be favoured as an addition to rather than as a substitution for existing methods.

There is a distinction between the grant of statutory powers for a great variety of public services and the grant of powers for acquisition of land only. If a new authority is appointed to deal with the acquisition of land only, its duties would be very great and important. It would be able to solve many pre-war difficulties in connection with the compulsory acquisition of land as well as the urgent problems which will arise during the process of reconstruction.

The intention of the paper was to endeavour to explain the main features of the new proposals, and to make observations on points which appear to require discussion.

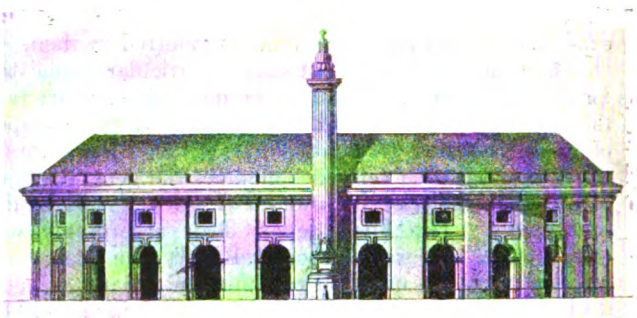
AT the Royal Institute of British Architects, on Monday next, at 5 P.M., a Paper will be read by Mr. Raymond Unwin, F.R.I.B.A., entitled "Housing: The Architect's Contribution."

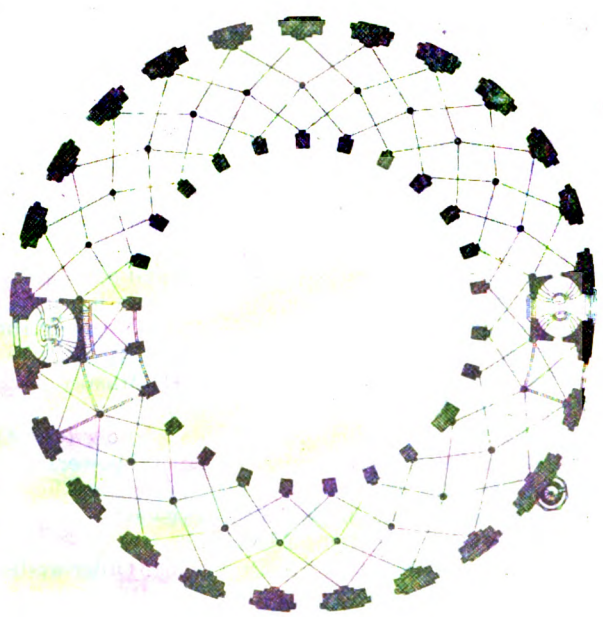
AT Greenock Dean of Guild Court—Dean Shearer presiding—the annual statement of business was submitted. The estimated value of new buildings, additions, &c., was £45,221, an increase of £6,051. The buildings were chiefly for industries and manufactures. It was the first year in which there was no application for the erection of dwelling houses, the scarcity of which is more acute than ever.

Paris in 1808.

NO. 9.—THE CORN MARKET.

THIS building was erected on the site of the Hôtel de Soissons, which had been occupied for five hundred years by Philippe-le-Bel, Charles V., Louis XII., who gave it to a community of filles pénitentes. It was also occupied by Catherine de Bourbon, sister of Henry IV., and Charles de Soissons, at whose death it passed into the possession of the Prince of Carignan. It was demolished in 1748, a column only belonging to the house being left. It was acquired by the city of Paris in 1762 for the erection of a corn market, which was built in 1763 from the designs of Camus de Mézieres. The central court was covered in 1782 with a wooden dome from designs by Legrand and Molinos. This dome had a diameter almost equal to that of the Panthéon, and was lighted





with 25 lunettes and was 100 feet in height. It was burnt in 1802. The column was built by Catherine de Medicis in the courtyard of the Hôtel de Soissons in 1572 and was designed by Bullart. It contained a staircase which led to an upper chamber used as an observatory by the queen and her astronomers. At the base of the column was a public fountain and a sundial on which time was recorded by an ingenious contrivance. In 1802 the dome over the building was restored.

THE Ross Urban Council have requested the Streets and Sanitary Committees to report on a housing scheme. The estimate is that 100 new houses will be required in the district.

THE American War Trade Bureau announces the immediate removal of the export restrictions on several hundred commodities, including various alloys, metals, certain tins, certain iron and steel commodities, also machinery, tools, locomotives, chemicals, drugs, manufactured rubber, and railroad and building materials.

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Picture Exhibitions.

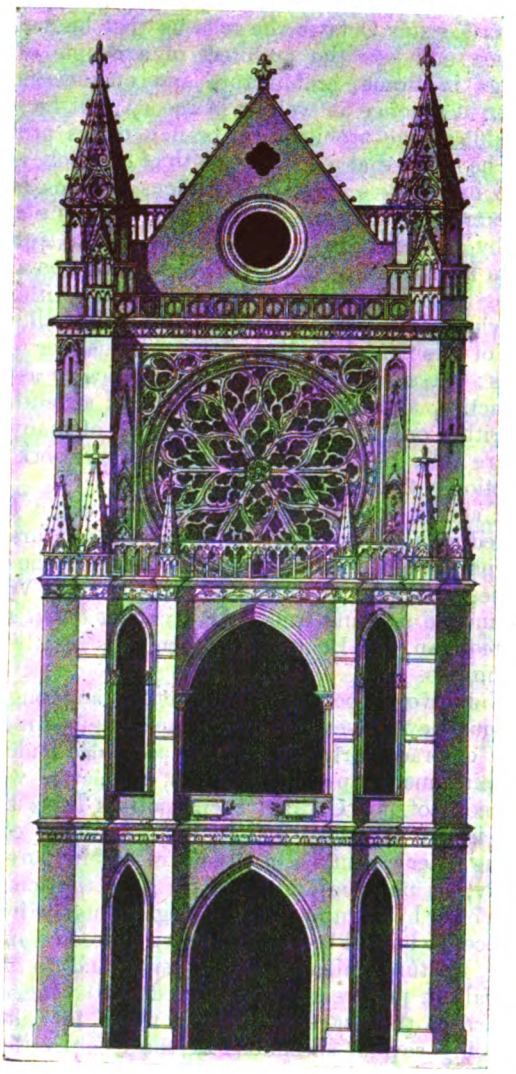
The first impression on entering the Goupil Gallery to see Mr. John Everett's painting of camouflaged ships is that we are encountering some advanced movement in painting. Certainly never before have we been so amazed, even attracted, by the gay riotous colouring of ships, and colouring apparently to the plain man without rhyme or reason, but let us admit with singularly decorative effect. We doubt whether a better artist, an artist more in sympathy with the whirling lines of these rainbow colours, could have been found than Mr. Everett. Except we think in one instance—and it is the obvious intention of the artist that it should be so—we do not see these ships in dirty weather, in the varying atmospheres of the sea, but we see them as nearly and as vividly as if they were patrolling the Grand Canal at Venice; we see them in dock discharging or being painted, or leaving the harbour. They represent, as it were, shipping at a fancy dress ball. Behind all this gaiety of colour there is a sort of science of perspective; they are decorated but to deceive, like a courtesan: and there is good reason to believe that they have misled many a wily enemy submarine and saved many lives. Lieut.-Commander Norman Wilkinson, whose seascapes are known to all lovers of sea paintings, is responsible for the invention of the so-called dazzle painting which is visualised with such excellent artistic result by Mr. Everett. He has grasped the decorative qualities of his subject, and therefore valuable as his pictures are as records in a curious phase of warfare, they are equally valuable independent of their subjects as works of art.

The Royal British Colonial Society of Artists is to be congratulated upon having the galleries of the Royal Academy placed at its disposal for the present exhibition. It is indeed only fitting at the present time that we should offer the best of our hospitality to our Colonial brethren, although membership of the Society is not limited to overseas artists. The chief interest of the exhibition exists in the loan of the whole of the War Memorial pictures painted for the Government of the Commonwealth of Australia. Among the artists who have contributed to this section are Mr. Will Dyson, Mr. George Lambert, Mr. Arthur Burgess, Mr. Arthur Streeton, Mr. A. H. Fullwood and Mr. Fred Leist. The majority of these artists possess military rank. Impressionistic records of the war are rapidly accumulating; but the synthetic picture has not yet appeared, or only rarely. The pencil sketches and water colour drawings which are daily gathering volume are often scarcely more than, as it were, memoranda, jotted down for future reference. The artist's impressions are in a transitory stage, they are in the process of a fuller realisation. In the years to come we shall no doubt find this more completely expressed. Mr. Arthur Burgess in his oil paintings, in which are expressed the vigour and movement of war scenes, carries us a little further; and Mr. Arthur Streeton in the "Ruins of Amiens" shows us an aspect of devastation which is more than a record. Among the contributions to the remaining section of the exhibition there are some admirable drawings by Major H. C. Corlette, of the Gothic sculpture of Albi Cathedral, and other subjects of architectural interest, Miss Thea Proctor (of New South Wales), and Miss C. L. Allport (of Tasmania), have sent some charming water colours for fans. The contributions of the British members are numerous, and provide notable examples of the work of Mr. Terrick Williams, Mr. Spenlove-Spenlove, Mr. W. L. Hankey, Mr. H. Stanton Hughes, Mr. J. Coutts Michie, and many others. There is also a small exhibition of sculpture to which Mr. Bertram Mackennal, Mr. Alfred Drury, Major Lessore, and Mr. Harold Parker have contributed.

Everyone who likes a garden (and who does not?) will discover some interest in Miss Frances Drummond's collection of water colours on view at the Great War Galleries in Grafton Street. Miss Drummond's delight in flowers extends beyond gardens, however, whether formal or wild—it extends to the primroses or blue bells in a wood or to captivating plains of sea lavender. Her technique is smooth and agreeable, and she appreciates the decorative qualities in her subject, both in line and colour. Her water colours of copses and woods possess a charm equal to that expressed in her pictures of gardens. Altogether the water colours form a very pleasant exhibition of pleasing subjects.

Paris in 1808.

NO. 10.—LA SAINTE CHAPELLE.



The foundation of La Sainte Chapelle is attributed to Robert, the son of Hugh Capet, and it was first intended as an oratory for the knights of Notre Dame de l'Etoile. Louis le Gros added to it and Philippe-Auguste commenced to rebuild it, but St. Louis actually built the church which exists in 1245-48 from the designs of Pierre de Montreuil.

The Sleaford Town Council have passed plans for a new cinema to be erected in Southgate.

Birstall District Council propose, as a war memorial, the erection, in the centre of the town, of a public hall and new municipal buildings.

At Adlington Urban Council meeting a letter was read from Mr. R. R. Roberts on the subject of the provision of a war memorial for the district, and the Council decided to invite the Parish Councils of Anderton and Heath Charnock and the parish meeting of Duxbury to join in a scheme.

Mr. Benjamin Seebohm Rowntree, lecturing before the Royal Society of Arts, stated that if 325,000 houses were built by the end of 1919 we should just make good the additional shortage created by the war. There need be no difficulty if assistance is given to the builder and restrictions on use of material are removed.

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Vitruvius on the Profession.

THE text of Vitruvius has had many commentators, supplied much material for antiquarian discussion and textual emendation, and exerted a wider influence on art than any other technical treatise ever written; yet his biography goes into a few colourless paragraphs, and we have been content to have it so. A little study of the text, however, will show the reader that his personality, as expressed in his views of his profession, will emerge clearly enough if we will only let it, and the engineer in charge of military machines under Augustus becomes a very real person.

Appointed to his office through the influence of the Emperor's sister Octavia, he tells us that he had served in Africa and was the architect of a couple of public buildings in Rome, architecture and engineering going together in practice as well as in theory; but he was not successful in the architectural branch of his profession, though he hopes that, on the strength of his book, posterity will do him justice. His posthumous rewards from his own countrymen consist of an incidental mention of his name by Frontinus in his treatise on Roman aqueducts, and the lifting bodily of his chapters on stucco and wall painting into the text of Pliny—and this without any acknowledgment whatever. This is literally all that we know of his life, whether from internal or external sources; but a man is known by his precepts as well as his practice, and we may learn more of an author who has written on his own profession than of many whose lives are fully recorded but whose literary work has no connection with their official duties.

An architect, according to Vitruvius, ought to be an educated man, always ready to improve his natural parts; and if philosophy, medicine, and the theory of the heavens seem less essential qualifications to us than to Vitruvius, the principle remains true. An architect *ought* to be an educated man, and Book I., Chapter I., is rightly devoted to saying so.

Of a divorce between architecture and engineering Vitruvius never even conceives, and engineering in his theory embraces artillery as well as bridge-building, all arts being made up of two things, the actual work and the theory of it. Care in such matters leads to a due appreciation of order, symmetry, propriety, economy, and the other essentials of the art of architecture; consequently, as no true architect will spoil the temple of a virile power by daintiness, or an elegant interior by a mean entrance, so he will be careful to give bedrooms an eastern aspect, picture galleries a northern, and to use local materials in preference to imported. His suggestion of a return to the usage of former times by killing and examining several specimens of the local cattle and so ascertaining the character of the site before entering on any general scheme of town planning may cause a smile, but the underlying questions of the food and water supply and the consequent healthfulness of the site are serious and permanent questions which might be worse solved than by an inquiry into the usual health of the usual inhabitants, animal or human, and the question of transport (I., 5), on which Vitruvius lays so much stress, is only beginning to be realised.

It is worth noting, in passing, that Vitruvius' remark on the excellence as masonry of the brick walls of Arezzo is said to be amply confirmed by the discovery of a portion of them during 1918. Details, unfortunately, are not forthcoming.

Book II. is ushered in by an introduction famous for its personal touches. Vitruvius laments his age, illness, and dwarfish stature in contrast to the good looks and stately bearing of Dinocrates, the famous architect of Alexandria, but expresses his confidence in the approval of Augustus. Then he falls at once to a discussion of the dwelling house, its design and materials, from the mud huts thatched with reeds, of which examples still stood in Rome, to the stately palace of brick or marble. He thoroughly approves of the "passing" of bricks by a local authority to ensure their being dry and not liable to crack, whereas the sooner sand is used the more valuable it is. He then urges that it is better to spend your money on sound and well-burnt brick, except for partitions, than to save on "wattle and daub" and never get a damp-proof wall. If for "wattle and daub" we read rough-cast, the position comes home to us all. "The more it saves in time and gains in space, the greater and wider is the disaster it may cause." Very, very true. Flats being a necessity to the accommodation of a growing urban population, the materials must be sound, and obsolete by-laws amended where necessary to allow of the requisite strength of walls and foundations; only in such cases it is more than ever desirable to use non-inflammable wood such as the larch of Larignum, whose fire-resisting properties had so astonished Cæsar.

Men of the Renaissance, with their thirst for things classical, found Books III. and IV., dealing with the temples and the Five Orders, all engrossing, and have to some extent imposed their views upon posterity; we are more concerned here with Book V., whose introduction urges brevity and clearness in the case of technical treatises, especially in times of public excitement, and the avoidance as far as possible of technical terms, which contrasts rather sadly with the undoubted obscurity of some of the writer's own phrases. But it is not his fault that the adequate editing of his text is a new labour of Hercules; let us rather be grateful for the soundness of his principles and for the light thrown by his work upon ancient buildings and customs, notably in the fifth book. "The columns of the upper tier should be smaller than those in the lower." When we think of the shops with expanses of plate-glass on the ground floor, apparently supporting unaided a vast row of first-floor columns, which have found favour in almost every town in England, we may well wish that the training of our architects included, as it did in the sixteenth and seventeenth centuries, a knowledge of Vitruvius. A study of the laws of acoustics before the erection of a town hall is also an elementary consideration not always attended to, and the provision and aspect of theatres, colonnades, athletic grounds, and green open spaces are matters sadly neglected of recent years. Not that Rome in the days of Augustus was perfect by any means. The introduction to Book VI. contains a lament over the success of the touting architect. "I have been taught that it is the proper thing to undertake a job only after being asked, and not to go asking for it." Consequently he has only done moderately well, but "small means and a good name are better than wealth and a bad one, and I hope my publication will keep my name alive to posterity, though I am little known now. If only we could go back to the ancient practice of securing an architect of good family and decent education, and put ourselves into the hands of gentlemen instead of untrained impudence, ignorant even of the use of tools! In no other case do people attempt to practise an art they don't know; they don't mend their own shoes or dry-clean their own togas, to mention nothing more important; but just because the professional architect really does not know his art, the amateur thinks that anyone can be an architect, and so everyone suffers." (Cannot the R.I.B.A. note?)

(To be continued.)

THE Reading Town Council have provisionally approved the scheme for the erection of fifty houses.

OSWESTRY Town Council has decided to inform the Local Government Board that delay had been caused in formulating a scheme for erecting 100 new houses for the working classes owing to the high price asked and a reluctance of some owners to sell land

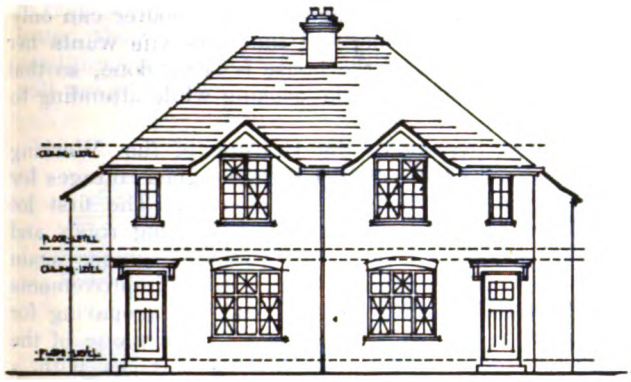
MR. W. J. COURTAULD, J.P., chairman of the Braintree Bench, has decided to present a new hospital to the town of Braintree to accommodate twelve beds and to be fitted up with the latest appliances to include an *x*-ray installation. It is estimated that the cost will be an amount exceeding £10,000.

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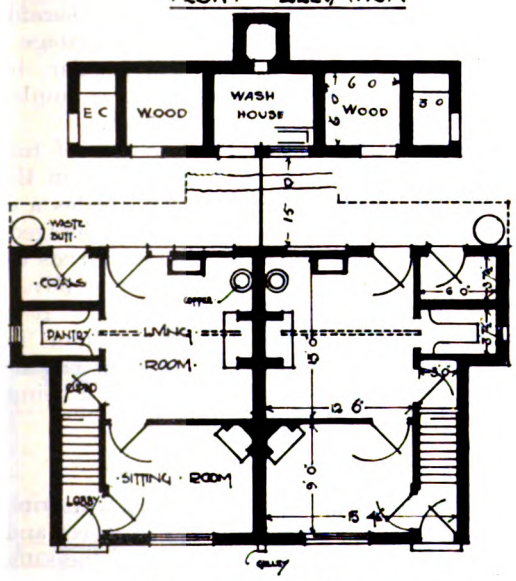
Monthly Housing and Town Planning Review

Eastriggs Housing Scheme.

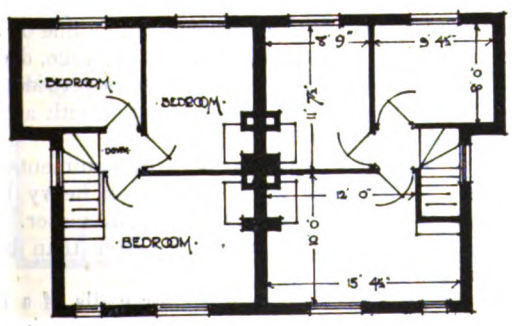
WE now complete our illustration of the Eastriggs housing scheme. The four numbers which we have devoted to the Gretna and Eastriggs buildings fairly illustrate this important contribution to modern housing. Both the lay out and detail of the buildings are excellent, and Mr. Raymond Unwin has reason to feel satisfaction with the results achieved. We hope at a future date to be able to illustrate some of the buildings more adequately than we have been able to do with the material available at present.



· FRONT · ELEVATION ·



GROUND · FLOOR · PLAN ·



· FIRST · FLOOR · PLAN ·

PROPOSED COTTAGES, THEDWASTRE R.D.C

Houses for Agricultural Labourers.

ONE of the most important problems of the moment, and one which is engaging the attention of all enthusiastic reformers, is the housing question, and though the problem of housing people who work in factories is important, I venture to think that the housing of agricultural labourers is even more so, as on this largely depends the question of our food supply in the future.

In 1912 I was one of the two architects who were members of the Departmental Committee of the Board of Agriculture on buildings and cottages for small holdings. In the course of our investigations we visited cottages in several parts of the country and on the Continent. Although we saw many excellent small houses, I think the greatest experience we gained was what to avoid rather than what to imitate.

There is great controversy as to the most suitable position for new cottages for agricultural labourers. Some favour placing them on farms where they may be required. I cannot help thinking this is not a good arrangement. It would create a system of tied cottages and tied labour, and would not be in the best interest of communal life or the health of growing children.

Each new house ought to be capable of being regarded as a unit in a properly planned village.

If houses are required in any particular parish a scheme of village planning should be first thought out; the distance from the village school should be borne in mind. The interest of growing children would thus be considered, so that they might live in a community as near the school as possible. This will allow them to get a good mid-day meal. It is no hardship for the father to cycle a mile or more to his work, but to expect children, and especially infants, to walk a mile or more, to and from school, in wet weather must be detrimental to the health of the child. Parents also require social intercourse with each other after the day's work is done, and this cannot be obtained if cottages are situated on the farm where the means of communication is by indifferent farm roads or muddy footpaths.

In starting a housing scheme, once the site is selected the first thing to consider is the laying out of roads. In doing this straight roads should be avoided. The pleasing effect of many of our old villages, with their curved lines and houses not all in a row, can be imitated with advantage, and are much to be preferred to the perfectly straight roads and blocks of houses all alike, which was a feature of the Victorian era.

In laying out a large site for a number of houses an occasional green should be left, preferably with a tree or trees on it, which gives a picturesque effect to the surroundings, and forms a playground for children, at the same time keeping them off the roads and out of the danger of motor cars.

Each lot should be laid out so as to contain about a quarter of an acre of land. This allows for a good vegetable garden, and room for keeping pigs, &c., which should be encouraged. A quarter of an acre of land may seem large in some districts, but in most agricultural villages land ought to be bought at from £30 to £40 an acre, so that £7 10*s*., or even £10, per house for land is not a large outlay, and is worth much more for the value of the garden alone.

These houses should be built in pairs and not in blocks. The small saving in cost in building in blocks is more than compensated by the many advantages of building in pairs; the planning is more simple, and the effect more pleasing.

The housing of the agricultural worker is quite distinct from general rural housing, and the actual accommodation of the house is one which calls for most careful

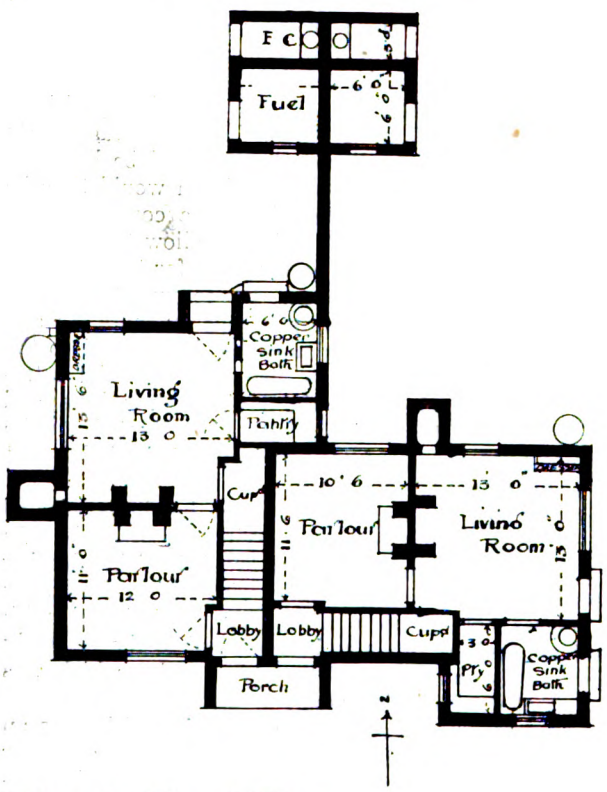
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consideration, and will vary somewhat in different parts of the country.

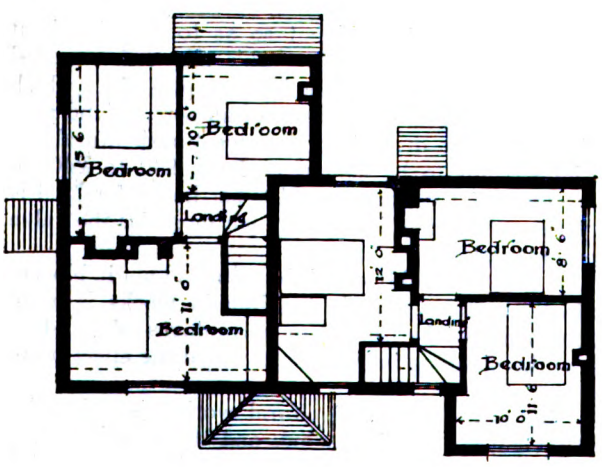
My experience is that the agricultural labourer's house should contain a small parlour, a combined living room and scullery, pantry, coal house or wood store, and three good bedrooms. If the houses are built in pairs, one washhouse with a copper, sink, and brick oven should be provided for each pair, and arrangements made for the tenants to use it on alternate days.



Elevation to Road



Ground Floor Plan



Bedroom Plan

PROPOSED COTTAGES, EAST STOW R.D.C.

Building in the future will cost more. The architect is more than ever faced with the problem of giving the maximum accommodation at the least cost, but even with this in mind, there is no reason why houses should not be carefully planned so as to be comfortable to their occupants, well built, and of pleasing yet simple design.

In the past one has seen so many so-called cheap cottages with attractive elevation, yet small and cramped inside, badly planned, without the least idea of convenience. The practice of building these small houses with a large living room, which contains the cooking range, and a small scullery with sink and copper I know is common, but if you visit these houses after the family is living in them, you will invariably find that the living room is converted into a parlour and the family are living in the scullery, no matter how small it may be. It must be borne in mind that the agricultural labourer can only afford one fire at a time, and the housewife wants her fire where the work of the house is being done, so that she may keep her eye on the cooking while attending to other duties.

Since the passing of the Housing of the Working Classes Acts, 1890 to 1900, I have designed cottages for several District Councils in this county. The first lot I erected was built with a combined living room and scullery. I have visited many of these cottages again during the last six months to see what improvements I could effect for plans which I am now preparing for cottages to be erected after the war. Every one of the tenants expressed their preference for cottages with a parlour, and those tenants in the first lot erected all expressed a wish that they had been built like those in the adjoining parishes. I am convinced, therefore, as far as East Anglia is concerned, that the cottage of the parlour type is the most suitable and popular, but the parlour should be very small, so as to give ample space for a good living room with a south aspect.

The poorest family have a few articles of furniture which they value, and like to display them in the best parlour as they generally call it. This creates a certain amount of house-pride which should be encouraged, as it has a beneficial influence on family life, and tends towards neatness and cleanliness in keeping the house tidy.

The parlour has also other advantages. It can be used as an occasional bedroom for a visitor or in case of sickness, or with a very large family it can be used as an ordinary bedroom, but if there is only a living room and scullery this is out of the question.

The Kitchen or Living Room.

This is the room in which the family will principally live. It should therefore have the best aspect and have a floor area of 170 to 180 square feet, and the same care should be bestowed in planning the position of doors, windows, &c., as would be given in a larger house. I have seen so many cottages planned with doors all close to the fireplace, making it impossible for anyone to sit near the fire without being inconvenienced by one or other of them. It should contain a good cooking range, dresser, sink, and, where no separate washhouse is provided, the copper also, but the copper should be fitted with a patent steam consuming apparatus.

The floor should be of good tiles or pamments, laid on concrete, as the occupants wear thick heavy boots, and much mud is brought into the house in winter. Tiles are much easier to clean, and wear better than boards under these conditions.

I have found a very good finish for walls of a living room in a cheap cottage is to build the inside with Peterborough bricks, fill in the joints flush and give two coats of distemper, and then two coats of hard petrifying paint. This gives a good hard surface almost equal to glazed bricks, and is not displeasing if finished with a dado of sage green and light stone colour above; it wears much

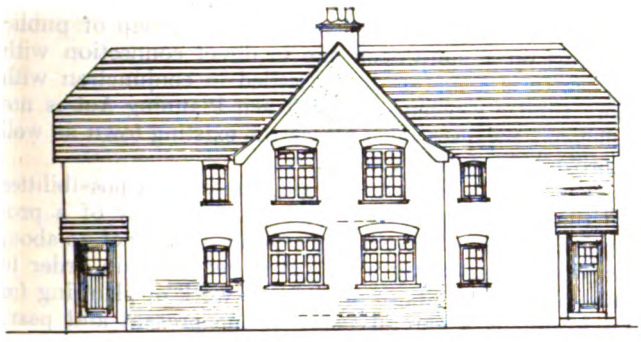
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better than plaster, which is so liable to chip, especially if painted.

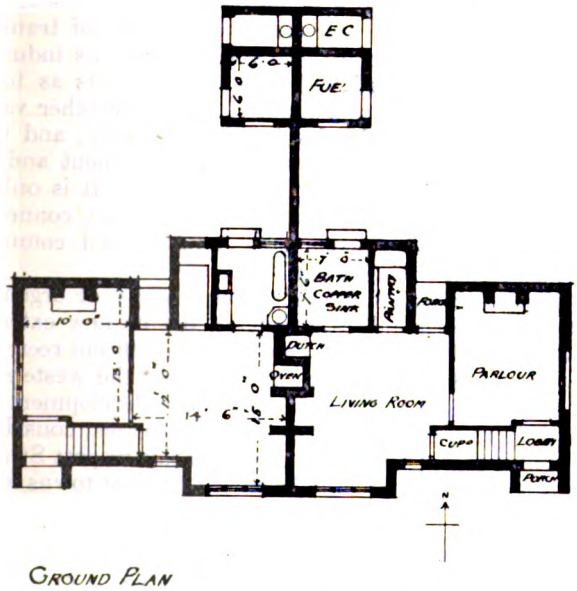
Where cottages can be provided which contain just above the minimum accommodation, the first addition I would suggest is a separate scullery. In this case I should still put the cooking range in the living room, but put the sink and copper in the scullery, and no fireplace. I should also provide a bath. The walls and floor I should treat as described for the living room.

Baths.

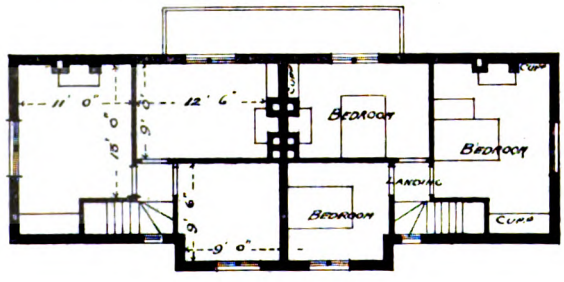
I should like to see a bath provided in the very smallest house, but in my experience it is very little use putting a bath in a cottage where the water supply is from a pump outside, which may be from 10 to 100 yards away, and where there are no drains. If it were possible to provide a separate well for each pair of houses and fix a pump in each house over the sink, and drains to carry away the water, then by all means provide a bath, but if the above conditions do not prevail, then it may be left out, for it will never be used. A very good arrangement for the parlour type of house, where it is wished to provide a bath, is to build a small room about 6 ft. by 6 ft., off the living room, and put the copper and bath only in this. This will thus serve the two purposes of a washhouse and a bathroom, and keep both away from the living room (see plan No. 1).



ELEVATION OF PLAN Nº 2.



GROUND PLAN



BEDROOM PLAN

ALTERNATIVE DESIGN. PROPOSED COTTAGES. EAST STOW R.D.C.

The Parlour.

This can be quite small, say floor area of 120 to 130 feet; it should have a boarded floor and a good register stove which will burn wood.

The class of stove for the living room must vary with the locality, but in most country districts one which will burn wood is generally preferred.

The Fuel Store.

The fuel store should be at least 6 ft. by 6 ft., as, though not much coal is used, it is important to make provision for storing wood where it can dry properly.

The Washhouse.

Where it is not intended to provide a bath in the house, one washhouse away from the main building can be provided for each pair of cottages. This would then contain a copper, sink, brick oven; the floor should be of cement, with a fall for washing down; a good strong fixed table should also be provided.

The Larder.

This requires to be made larger than is usually provided in the small house, as large stocks of provisions must be kept in the country. Salting pans for bacon have to be provided, also a place for home-made bread, and often a barrel of home-made beer. A copper is often appreciated, so that brewing may be done at home; the galvanised iron copper is not considered suitable for brewing. The aspect of the larder is an important item.

The Bedrooms.

The largest bedroom should contain a floor area of at least 150 square feet, and the smallest not less than 80. It is important to see that the beds can be suitably placed, and in the large bedroom there should be a place for a cot beside the bed. Two of the bedrooms should have fireplaces.

A cottage with the sizes of rooms as mentioned would contain about 19,500 cubic feet.

I have erected many of these before the war at prices ranging from £350 to £400 per pair, varying according to local conditions.

Drainage.

In the Eastern counties many of the smaller houses have no drains. This may seem very inconvenient to the town dweller, but it is not so. The sink is often provided in the ordinary way, and a pail kept under it to catch the drainage; and this is simply emptied on the land, and where there is a big garden this causes no inconvenience. If the pail is outside it is often allowed to overflow, and causes a nuisance.

The difficulty in arranging for water supply and drainage on a small site is to prevent the drains fouling the well. If the ordinary cesspool is provided it is usually not watertight, and is liable to percolate into the subsoil and pollute the well. If it is made watertight, arrangements have to be made to empty it at frequent intervals, and this entails labour and expense. Where a large number of houses are being built at one time and the site is suitable, drains should, if possible, be provided and collected into a septic tank and passed over a filter, and the effluent led into a ditch near.

I do not wish to give the impression that I approve of houses without drains or a water supply to each house, but these conditions exist in many small villages, and until such time as each village has a proper water supply I think it is best to omit drains in most cases.

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The Structure of the House.

In deciding on the structure of the house, much must depend on the local material at hand, but the building should be of such a nature to insure the minimum of expenditure in subsequent repairs and upkeep.

Economy should therefore be sought by careful planning and construction, and not by cutting down the sizes of the rooms or the quality of the materials, workmanship, and fitting.

Locks and furniture should be of good strong quality that will not always need attention. Skirting and architraves with simple rounded edges are far preferable to cheap moulded ones; ledged, braced, and boarded doors of good quality are better than cheap panelled ones. A picture mould round the room saves a lot of trouble in repairing plaster. Doors, windows, and other fittings should be standardised as far as possible.

For small cottages I like good casement windows cut up with bars into rather small panes. They can be made more pleasing than sash windows, and smaller panes are not so easily broken, and are less expensive to repair if they are.

The height of the ground floor room should be 8 ft., and the bedrooms 6 ft. 6 in. to top of plate and 9 ft. to the collars.

I have designed and carried out a number of small houses and cottages in country villages, with 9 in. walls all of Peterborough bricks. The outside from foundation to about 1 ft. 6 in. above ground line is given two coats of hot tar, and all the outside walls two coats of white or pale buff distemper. These make quite dry houses and look well, but I always give a good projection to the eaves and gables as an extra precaution to keep the rain from the walls. The chimney stacks I always finish in local bricks.

The plans illustrated are some I designed and carried out just before the war. Others are for schemes to be started almost directly.

Some of the cottages were let at rents which just paid expenses; others are a charge on the rates, and will be until the loan is paid off. The cottages to be erected in the future must be subsidised by the Government in some form. It is for the architects who may be called upon to design these to give of their very best, so that they may help, if only in a small way, to solve some of our urgent social problems.

A. Ainsworth Hunt, M.S.A.

Swansea.

On November 9 the Swansea Boundary Extension came into force and its area increased from a little over 6,000 acres to more than 24,000. This is one of the biggest extensions that has taken place recently, and like the Birmingham one, to which alone it can be compared, the new areas, while containing a large population, are also to a great extent undeveloped. Both these towns have broken away from the usual method of the piecemeal absorption of suburbs as they grow up, and it is no doubt the right method; if a town is to increase the area which it administers it should not wait until the outside parts are developed, but secure them in advance in order that they may control the type of development. This refers in a very special degree to the main arterial roads which, in so many cases, so soon as they leave the municipal boundary drop into country roads along which the houses, with a minimum set back provided in the rural by-laws are allowed to be placed. There is, of course, the remedy of a town planning scheme extending outside the municipal boundary, by which it is possible to safeguard these districts, but there is no doubt that if surrounding local authorities could be induced to come whole-heartedly into a town, it is the more simple and easy to achieve. With the town planning scheme there is always the possibility of friction with outside authorities and the squabble over certain requirements entailing expenditure, which the outer district does not see the force of meeting.

But a great extension like this of Swansea immediately identifies all interests, and the glamour of a huge city will carry all before it if proper use is made of the impetus of local life caused by this infusion of new blood. In the case of Swansea there is the additional impetus which has always worked so strongly and, generally speaking, beneficently in cities, namely, that of a friendly rivalry. Cardiff, owing to its fortunate possession of a magnificent civic centre, the finest in the country, on which it has also built some of the finest buildings, has hitherto been looked upon as not only the capital of South Wales, but of the whole of Wales; but there are many reasons why Swansea with its enlarged area and great increase of population should prove a formidable rival. Now is the moment to put forward a great comprehensive plan of development: the closely built part of the town has followed the coast and valley of the Tawe, and has left several places in which it would be possible to break through from the centre into open country. Whether it would be possible to create a dignified civic centre near the present station or to locate a great group of public buildings on a more open site in direct connection with the centre is a matter to be settled in conjunction with many similar problems. The Town Planning Act is not sufficient: Swansea must attack the existing town as well as provide for future growth.

It is to be hoped that realising these great possibilities and the enormous value for an ambitious city of a progressive scheme of development Swansea will not go about this work in a trifling way. It is necessary in order to arrive at solid results to preface the work of planning for the future by a careful study of the present and past; that is to say, a civic survey should be started, which will show up in the form of a series of maps for comparative purposes the existing defects of Swansea, such as its overcrowding, and whatever absence of transport facilities exists; also a thorough survey of its industrial conditions is required with careful comments as to the suitability of the present industrial areas, or other vacant areas which should be developed industrially, and these in relation to future residential development and the general amenities and health of the city. It is only by means of some such survey that the direct connection between industries, commerce, housing and communications can be brought out.

Not only has Swansea an opportunity of organising itself as a great industrial capital, but its new extension provides within its own boundary a magnificent recreation ground in Mumbles Head, which closes the western end of the beautiful bay of Swansea. The development plan must certainly control the growth of this area, considering it as an integral part of the city. In this respect Swansea finds itself in a position to be envied by most towns in this country.

It will never have such an opportunity again. The recent extension of its area and the reconstruction period after the war provide a unique moment in which to put forward a great development plan, which should be prepared and presented in as thorough and attractive a form as that which was recently published for Ottawa.

A new town hall is to be built at Morecambe, it is suggested on the Poulton Hall Estate, and it is intended to obtain designs by a competition.

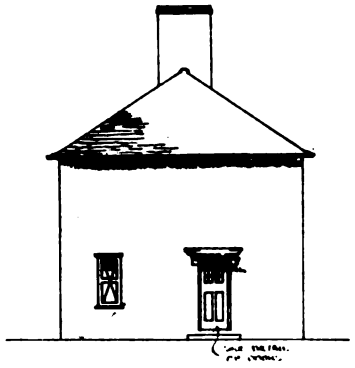
A movement has been started at the instance of the Standing Committee of Morayshire Farmers' Club to request the Government to put on the market all available building materials and small stores of every description which they will be selling on demobilisation in such quantities as would make them accessible to the smaller buyers of the country for a fixed period of time before offering the huge amount already suggested (£500,000,000 or thereby) to the capitalist contractors of the kingdom. By so doing the authorities would probably receive a larger net return, while buyers requiring such material would be able to acquire it at a more reasonable rate.

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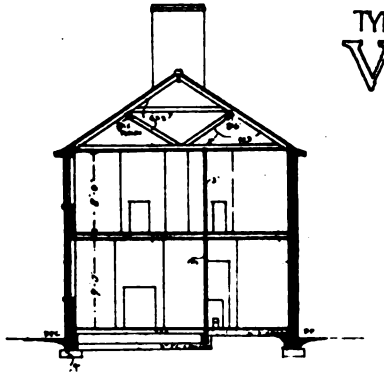
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MINISTRY of MUNITIONS of WAR

TYPE V D



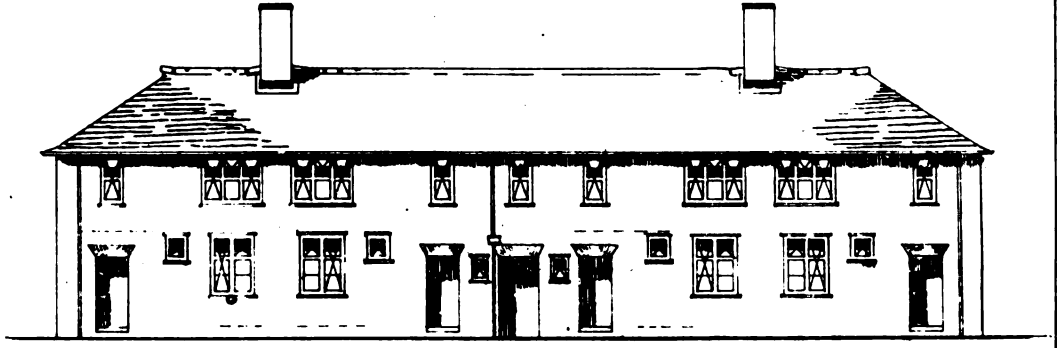
END ELEVATION



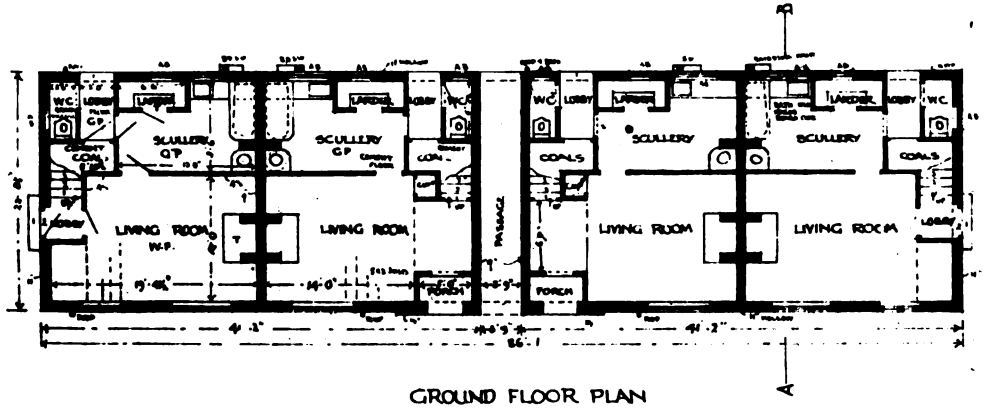
SECTION A-B



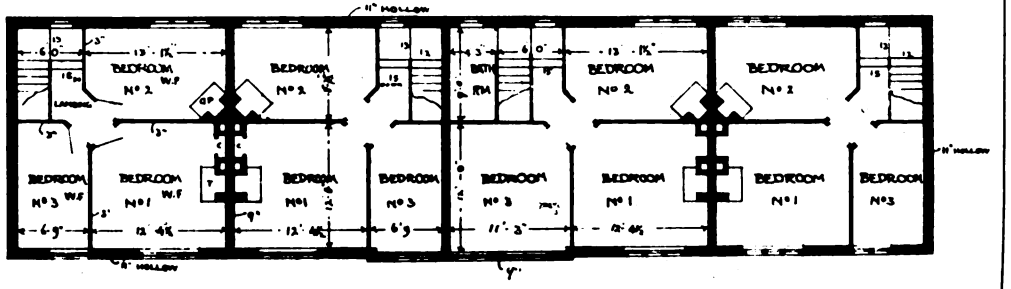
FRONT ELEVATION



BACK ELEVATION



GROUND FLOOR PLAN



BEDROOM PLAN

PHOTO LITHO BRAGUE & Co LTD 69 & 70 DEAN STREET SOHO W

OPERATIVES' COTTAGES, EASTRIGGS.

The Architect, Dec. 13th 1918.

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TYPE IXA.



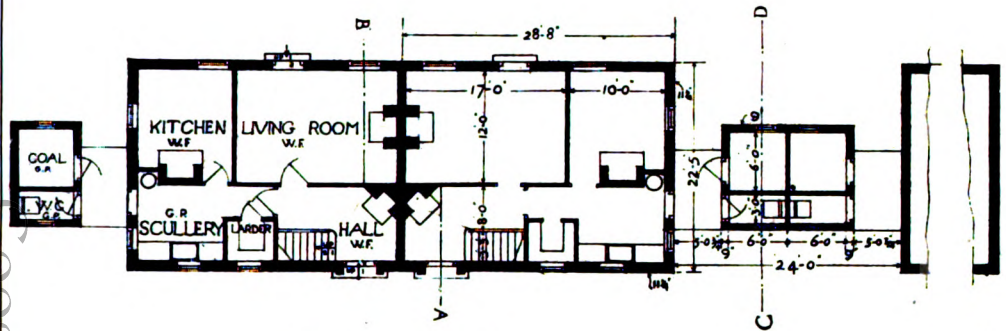
FRONT ELEVATION



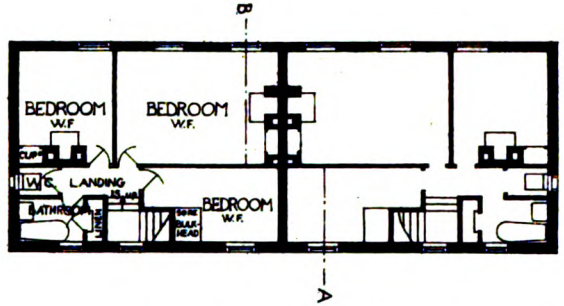
BACK ELEVATION



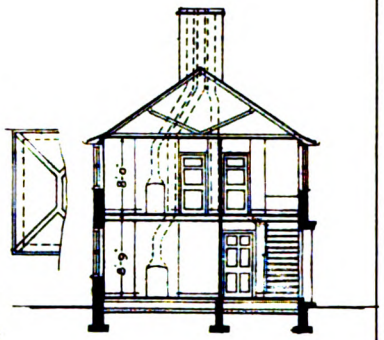
END ELEVATION C.D



GROUND PLAN



FIRST FLOOR PLAN



SECTION A.B.

The Architect, Dec. 13th 1918.

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PHOTO-LITHO. SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W

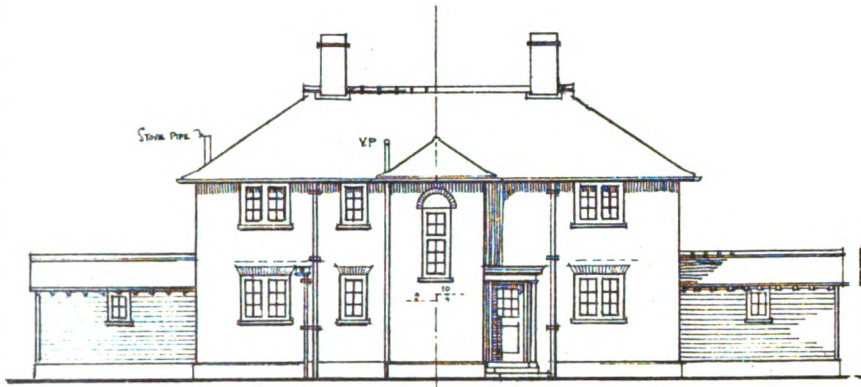
STAFF HOUSES. EASTRIGGS.

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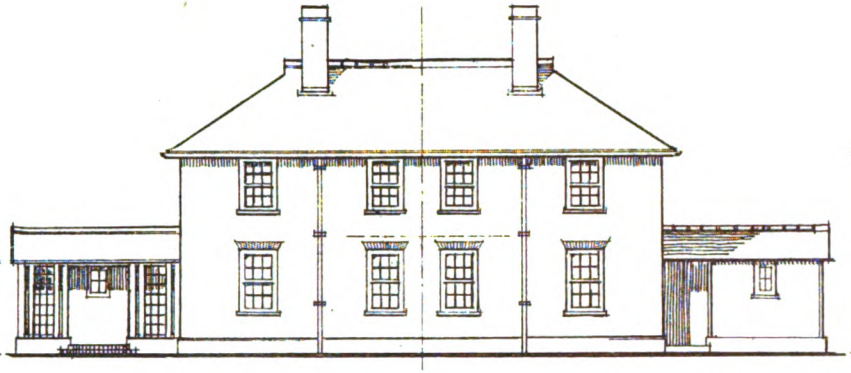
HOUSE FOR CHIEF ENGINEER

EASTRIGGS

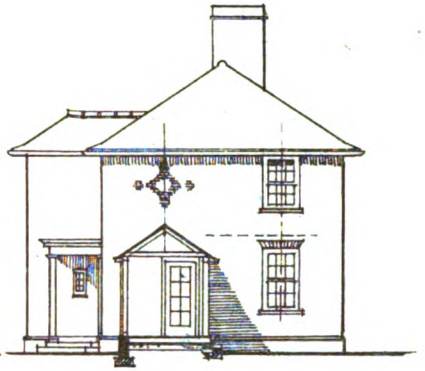
TYPE XIII. A



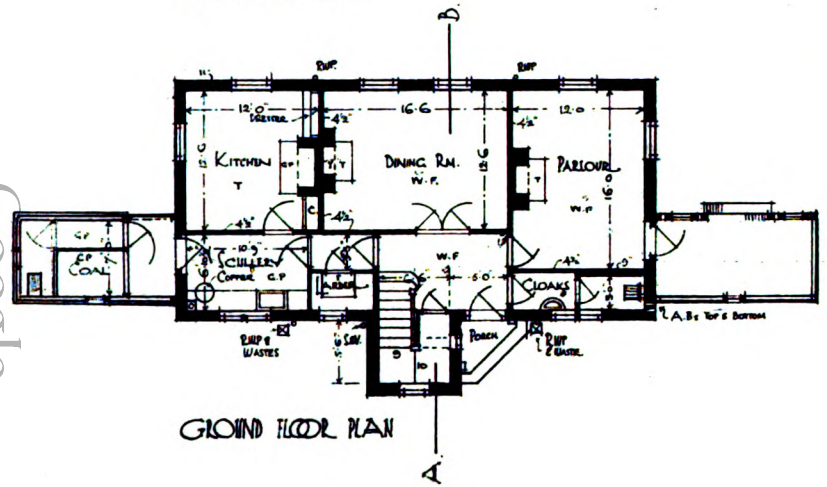
FRONT ELEVATION



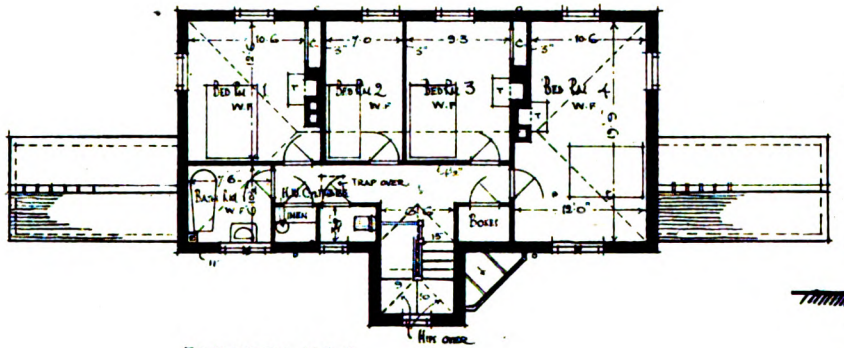
BACK ELEVATION



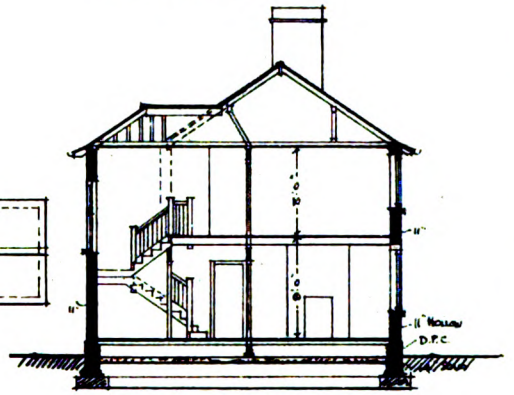
SIDE ELEVATION



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECTION A-B

PHOTO-LITHO. SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

The Architect, Dec. 13th 1918.

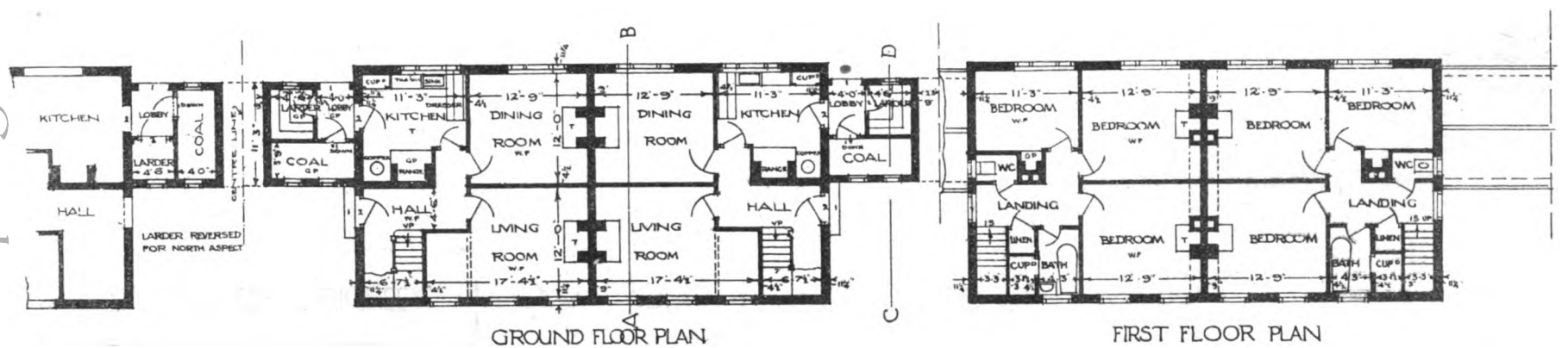
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TYPE VIII G.

WITH LARDER REVERSIBLE FOR NORTH ASPECT



SECTION C.D. FRONT ELEVATION BACK ELEVATION SECTION A.B.



GROUND FLOOR PLAN FIRST FLOOR PLAN

P. Unwin.

PHOTO-LITHO SPRAGUE & Co LTD 69 & 70, DEAN STREET SOHO, W

STAFF HOUSES, EASTRIGGS.

The Architect, Dec. 13th 1918.

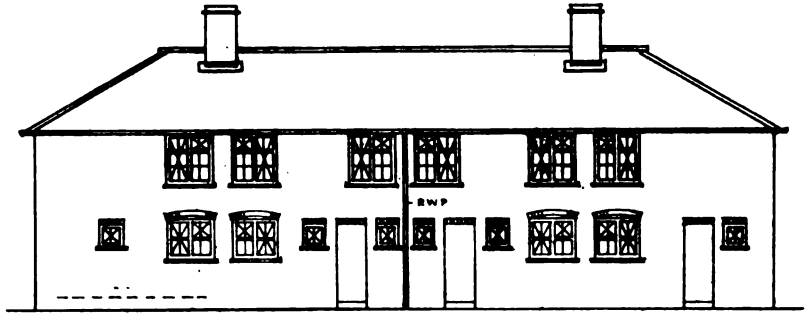
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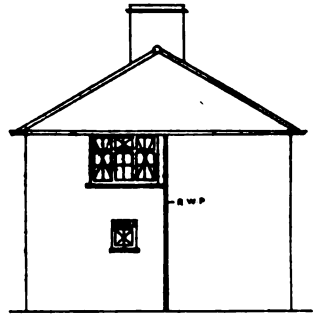
TYPE VF



FRONT ELEVATION



BACK ELEVATION



END ELEVATION

B	C	C	D

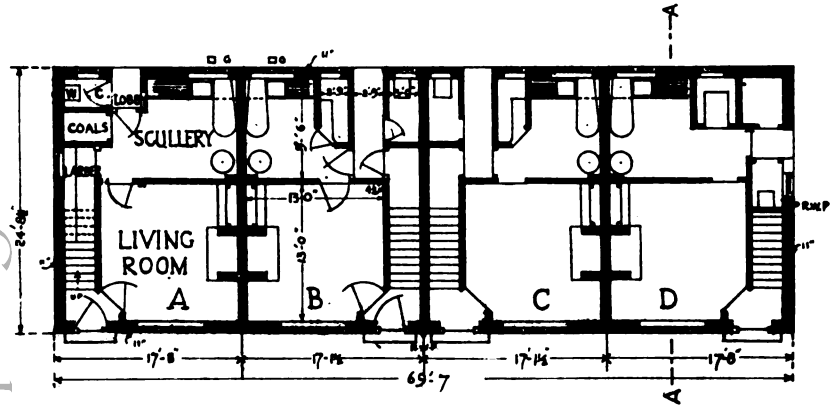
PLANS TO BE USED WHEN FACING SOUTH

D	C	C	A

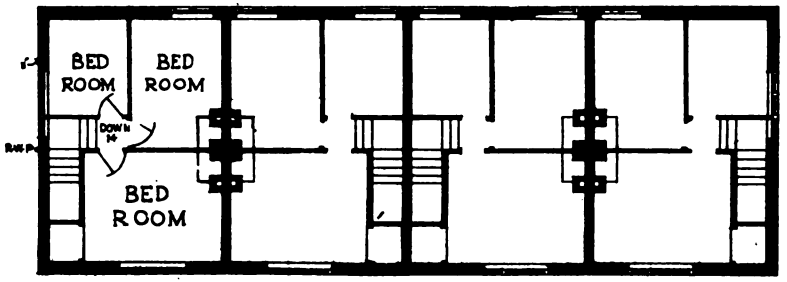
FACING SOUTH EAST

A	C	C	D

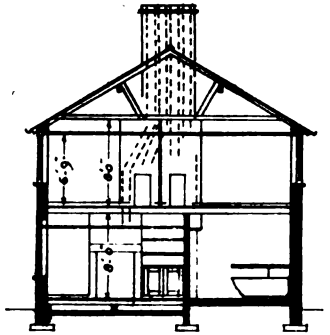
FACING SOUTH WEST



GROUND PLAN



FIRST FLOOR PLAN



SECTION A A

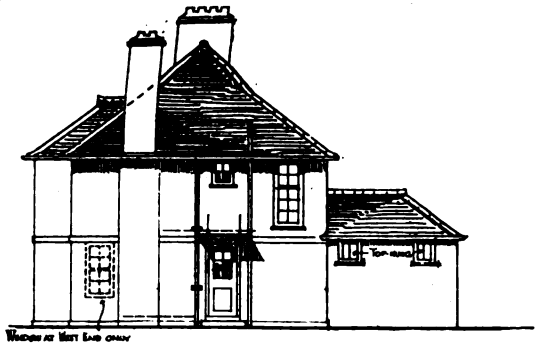
OPERATIVES' COTTAGES, EASTRIGGS.

PHOTO-LITHO SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

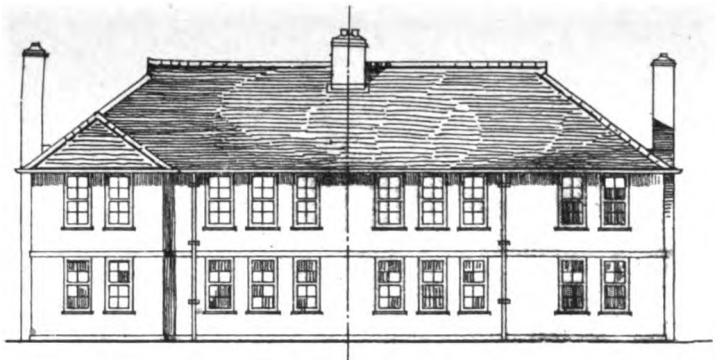
The Architect, Dec. 13th 1918.

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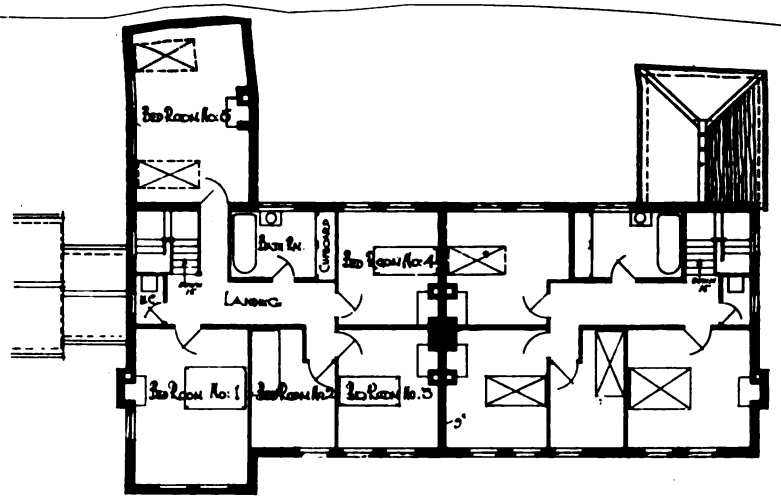
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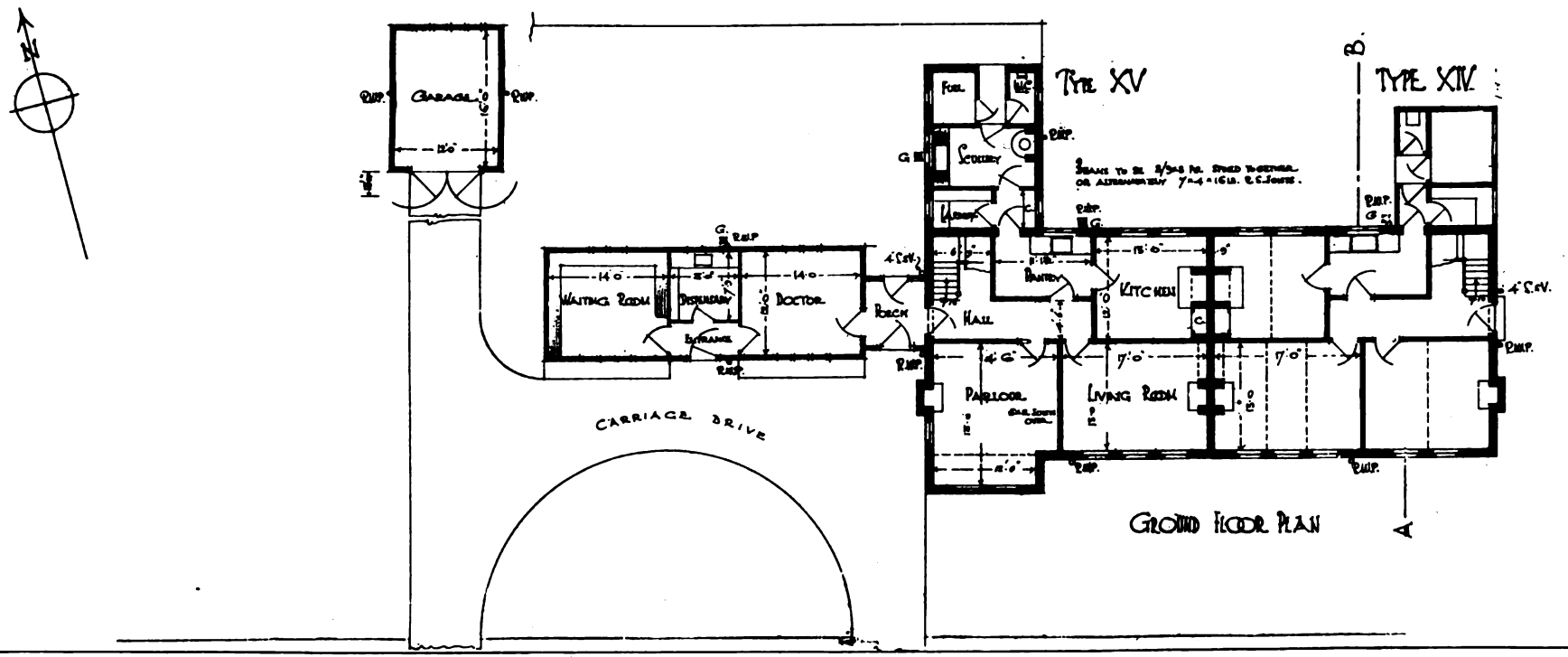
END ELEVATION (EAST)



FRONT ELEVATION



FIRST FLOOR PLAN



GROUND FLOOR PLAN

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The Architect, Dec. 13th 1918.

PHOTO-LITHO SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO, W.

DOCTOR'S HOUSE AND STAFF RESIDENCE, EASTRIGGS.

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Guildhall Memories.*

WE all know the story of the sale (such as it was) of "Lyrical Ballads" being due to old sailors who mistook "the Ancient Mariner" for a song of the seas, and the title of the very amusing book before us is open to similar misconception. Readers in search of history or archæology will be disappointed, but if they are wise, they will enjoy the political and artistic gossip put before them.

Mr. Temple has been for fifty years the servant of that most public-spirited of bodies, the Corporation of the City of London, first in a semi-clerical capacity, later as curator, one might say creator, of the Guildhall Gallery, and he has not wasted his opportunities. Early official relations with great men have been turned to the advantage of the Gallery and of the public; tactful appeals on artistic and patriotic grounds have borne fruit in the loan of works of art of priceless value, not from English owners only, but from French, Spanish and American, and even from foreign Governments. Pure enthusiasm for the spread of an enlightened taste in art, combined with the special knowledge without which such enthusiasm is a snare, has brought home to nearly three-millions of Englishmen that art, in the shape of fifteen special exhibitions at the Guildhall, organised and catalogued by Mr. Temple single-handed, is a strong factor in civilisation, and a common bond between nations.

And if the love of art is a common bond, so is the love of gossip. Mr. Temple's pages abound with anecdote. Lord Brougham and David Livingstone, Gladstone and Bret Harte, Disraeli and the Shah of Persia, Buffalo Bill and Simeon Solomon, King Edward and the poverty-stricken Frenchwoman who inherited and gloried in her thirty Chardins, we meet them all, and more besides. And it is pleasant to think that the man who, as a youthful clerk, had to select the quality of rope to be used by the City hangman, and rejected the first keepership of the Tate Gallery that he might carry out to the full his own conception of the Guildhall Gallery as a centre of artistic life, has so far won recognition as to have been asked to organise the artistic side of the Dublin International Exhibition of 1907, and to assist in the choice of that almost greatest of modern picture exhibitions, the art collections of the Franco-British Exhibition. It is not taking too pessimistic a view of the matter to see in a trifling anecdote of the Dublin Exhibition an important light upon the Irish question. Mr. Temple received threatening letters from more than one Irish Catholic because he had included in that exhibition Geets' "Lutheran Girl being taken to Execution"—a fact that staggered King Edward, who found it hard to believe that such intolerance existed in the twentieth century. Its only parallel, indeed, is that Mr. Temple received similar letters for hanging Millais's "Huguenots" at the Guildhall; but that was five-and-twenty years earlier, and they came from an older generation.

This book is the record of a lifetime's work, abundantly justified of its own generation. The Corporation Art Gallery was founded but in 1886, to contain the 288 works of art then belonging to the Corporation, and Mr. Temple gave up half his salary in view of the opportunity thus offered him. Thirty-two years later that total stood at 937. So much for the permanent gallery. During those thirty years fifteen special exhibitions have been open, free of all cost, save 6d. for an admirable catalogue, to all London, and all London has flocked to them to gain an appreciation not of English masters only, but of French, Spanish, Belgian, Flemish and Danish art such as had been impossible in this country, and would have remained so but for the single-handed courage, enterprise, and connoisseurship of Mr. Temple and the art of letting well

* "Guildhall Memories." By Alfred George Temple. (London: John Murray. 1918. 16s. net.)

Manifesto by the Land Union.

MR. LLOYD GEORGE at Wolverhampton on November 23 used the following words:—

"A great agricultural policy is a great industrial policy, it relieves the labour market and when you have got periods of depression, there is always the land."

The Land Union, founded ten years ago as a non-party organisation, has always stood for a strong agricultural policy based upon the maintenance of credit and security in land, and has done all in its power, both in Parliament and in the country, to advocate the State adoption of such policy.

It has read therefore with the greatest satisfaction the speech of Mr. Lloyd George, and provided the policy of the new Government is one which is really sound on land questions, the Land Union will do all in its power to assist that policy in being carried into execution.

It is, however, well to point out that good intentions do not necessarily mean a sound policy, and it is of great importance that every policy should be carefully analysed and watched, and further, even if the policy itself is sound, the details of administration require very careful scrutiny, otherwise its good effects may be vitiated.

The Land Union pressed for a right of appeal to an independent arbitrator against orders for enforced cultivation issued either under the Defence of the Realm Regulations or under the Corn Production Act, and was successful after a long struggle in obtaining this right, which was essential if a great output from agricultural land was to be obtained, as otherwise the confidence of the farmers could not be gained. The Government realised the justice of this contention and assented to the proposal.

This instance shows the importance of well-informed criticism, and in the future the Land Union will watch all proposals put forward for a strong agricultural policy, not in a hostile or carping spirit, but with a view to ensuring that before such proposals obtain final legislative sanction they shall be placed upon the Statute Book in a form most desirable in the national interest.

The Prime Minister also called attention to the urgent question of housing. The Land Union, realising the urgency of the question, has continuously pressed for the repeal of the Land Taxes of the 1909-10 Budget. Those taxes, in its opinion, were disastrous to the development of land, with the result that the building of small houses had seriously decreased even before the war.

In the well-known "Lumsden" case (which was fought by the Land Union) the Government claimed to tax builders' profits as a rise in site values, even where the value of the bare land had not increased, and it was decisions such as these which lowered investment value and credit of house property.

As in agriculture, if housing is to be successful, if money is to be invested in bricks and mortar, credit and security must be maintained. As Mr. Lloyd George stated, there must be no Bolshevism in land policy.

He added: "You must not take any man's property away, you cannot build a great State on dishonesty, you are bound to come to grief if you attempt it . . . whatever a man has got, pay him his full value for it."

This really expresses the policy of the Land Union.

The extension of occupying ownership, wherever practicable and desirable, has always been one of the objects of the Land Union policy, and it stands for safeguarding the interest of tenant farmers and others when unfairly attacked. Without supporting any party, it claims the right to view all questions of land on a national basis, and it favours the placing on the land of those able and willing to cultivate it, and will support all sound proposals to this end.

It is well, however, to point out that the interest of the men placed upon the land must be most carefully considered.

Finally, the Land Union views with great satisfaction the fact that not only the Prime Minister but public opinion endorses the view that a sound land policy is essential to the future prosperity of the country.

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Correspondence.

The London Association of Master Decorators.

Sir,—As you are, of course, aware, great efforts are being made in most trades and industries to strengthen the membership of associations both of employers and employees.

I am sending herewith copy of circular which is being sent out to London decorators, and should be obliged if you could see your way to publishing a paragraph calling attention to the Association and the desirability of those in the decorating and allied trades becoming members. I may add that the Association has agreed to assist the journeymen as far as possible in strengthening their trade union.—Yours, &c.,

Arthur S. Jennings,
Organising Secretary.

365 Bank Chambers,
329 High Holborn, London, W.C. 1:
November 27, 1918.

1. Because there is an immense amount of work which must be done at once for the benefit of the decorating trade in the London area, such as (*a*) pressure being brought upon the Government to give an early release of soldiers who are painters by trade and of controlled materials; (*b*) arrangements for the absolute adherence to agreed rates of wages and hours of work; (*c*) many other principles and practices of which the grievances of free estimating and grading of workmen are examples.

2. Because success in these and many other important matters is hopeless unless the whole trade is united.

3. Because the decorating trade is on the eve of the greatest boom ever known. The Bill for the Temporary Regulation of Wages provides that the present rate of wages shall be paid for a period of six months.

4. Because trouble at the end of that time is inevitable, unless both employers and employees are thoroughly organised, and in the meantime have set up joint councils who will deal with the subject.

5. Because every employing decorator who neglects to become a member will, whether intentionally or not, actually retard the earnest efforts which have been made for the uplifting of the trade.

6. Because every decorator who does join will thereby throw his weight, interest and influence in the scale towards the common good. Although he will only have done what might be said to be a distinct duty, he will benefit himself while benefiting to some extent the whole trade.

Please send in your application at once for membership. By doing so you may influence others.

Those who would like any further information are invited to call up or write to the Organising Secretary and Editor of "The Decorator."

P.S.—I presume that you are aware that you will be likely to obtain early release from the Army of painters formerly in your employ, provided that you fill up Form 406, to be obtained at any Labour Exchange.

Empire War Memorial.

Sir,—An unusual feature of the most recent proposal for a War Memorial on a large scale was that there was associated with it an Advisory Committee composed of leading representatives of almost every profession and calling except that of architecture.

By whom and for what purpose this Advisory Committee was constituted did not appear, and while it may be very advisable that there should be an Advisory Committee to deal with War Memorials involving questions of architectural composition and design, it seems to me desirable that any such Committee should be constituted by the professional societies connected with architecture, and should consist largely, if not entirely, of architects.—Yours, &c.,

C. McArthur Butler, Secretary,
Society of Architects.

Trade Notes.

As we find that a paragraph referring to asphalte in our last week's issue has given rise to considerable misunderstanding, we think it as well to state that we have no knowledge of any definite synthetically produced asphalte that has been proved as being equal to natural asphalte. At the same time synthetic productions are being continually brought out, and in many cases proved as satisfactory, and we therefore do not want to definitely commit ourselves to the assertion that no synthetic asphalte can be satisfactory. All we want to emphasise is the importance with a material like asphalte of getting it through an approved maker and avoiding material of foreign manufacture. The essential thing is that until it has been proved beyond doubt that good synthetic asphalte can be produced the customer should always require information as to the nature of the rock asphalte employed.

A striking instance of the value of fire doors was afforded by an outbreak that occurred on October 15 last at a large warehouse adjoining Bolton Station on the Lancashire and Yorkshire Railway, used for storing cotton. This building consists of four storeys, comprising a loading platform on the ground floor and three upper storeys. The latter are divided into three sections by two party walls built up from the main girders over the loading way, these walls passing through the roof to a height of several feet.

Three openings on each of the upper floors permit of railway trucks passing from one section to another, these openings being protected by double armoured fire doors of the automatic sliding type.

It was on the top floor of the central section that the fire originated, this and the floor beneath being damaged very seriously. So intense, indeed, was the heat, that the girders supporting the floors—which were of massive proportions in order to carry the heavy weight of loaded trucks—were distorted in an extraordinary manner, while the roof was destroyed completely. It is remarkable, therefore, that a fire of such intensity should be confined to the original section in which it broke out, and



even more so that in neither of the adjoining sections did the temperature at any time rise appreciably.

Examination after the fire had been subdued showed that all the fire-doors were uninjured, those on the far side of the party walls not even being blackened by the smoke. It was due entirely to the presence of these doors that the outbreak was prevented from spreading to the remaining portions of the building, with its valuable contents, and thus increasing the damage threefold.

The double armoured fire-doors at the Bolton Warehouse were constructed by Mather & Platt, Manchester, and consist of several thicknesses of well-seasoned wood, tongued and grooved and secured by clenched nails. They are covered completely with sheets of tinned steel in such a manner that, while free to expand, they exclude all air and cannot become detached.

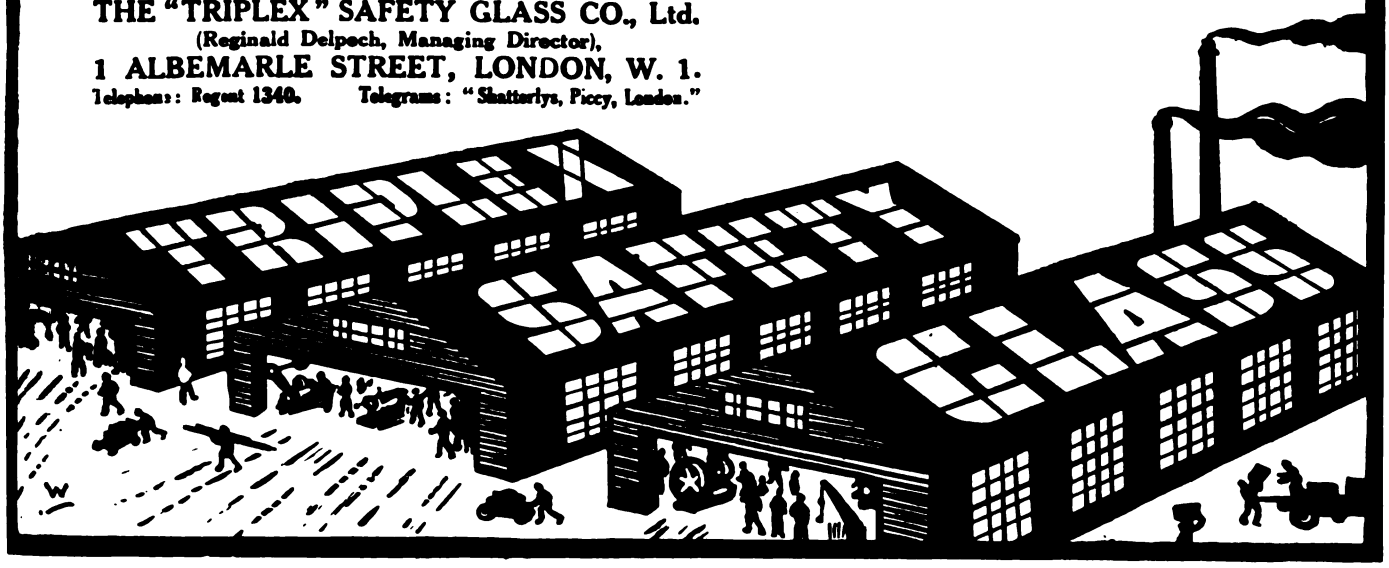
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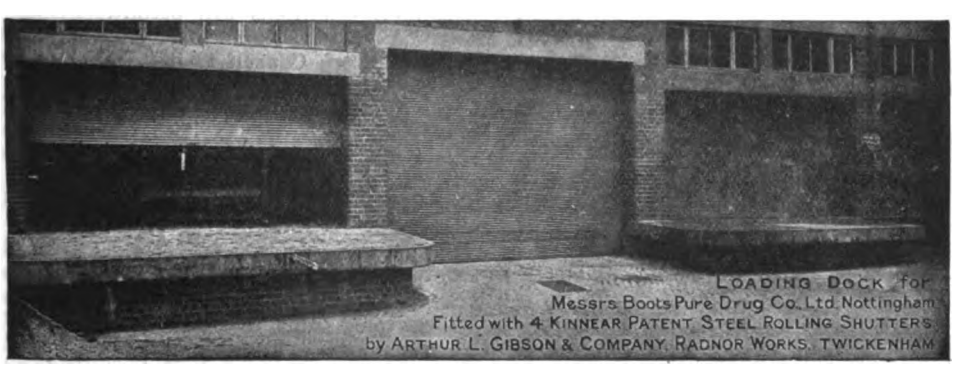
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Landlord and Tenant.

In the King's Bench Divisional Court on Monday, December 2, Mr. Justice Rowlatt and Mr. Justice Sankey heard an appeal by the East End Dwellings Company, Ltd., against a decision by Deputy-Judge Lush, who, at Westminster County Court had awarded damages amounting to £6 3s. to Mrs. Hardy, the wife of a tenant of one of their dwellings who sustained injuries by the breaking of a sash cord, the window falling upon her finger, and incapacitating her for some weeks. She claimed £25, and the Judge, while reducing the claim, held that the premises were not in all respects reasonably fit for human habitation within the meaning of the Act of Parliament.

Mr. Douglas Hogg, K.C., in support of the appeal, submitted that appellants were not liable, and that it could not be held that the house was not reasonably fit for habitation because a sash cord broke. Counsel also contended that notice must be given of any defect, and ignored by the landlord before damages could be given in such a case.

Mr. Horace Fenton, for the respondent, said Mrs. Hardy's husband had to lift the window up to let her finger out. The Judge had found she was totally incapacitated for six weeks and partially disabled for three weeks. Mr. Wilkinson (the secretary and manager of the appellant company) stated that he gave certain instructions to a builder but did not call the builder. Evidence of what the instructions were was objected to in the absence of the builder. Then Mr. Wilkinson proffered a builder's estimate which was also objected to. The superintendent of the dwellings said no notice had been given as to the sash cord, but that point was not raised in the County Court, though it had now been brought forward by counsel for appellants.

Mr. Justice Rowlatt: Notice is a point that occurs to anyone in a case like this.

Mr. Fenton: What notice could I give in the circumstances? It is a latent defect.

Mr. Justice Rowlatt: This might happen in the house of a prince. This dwelling seems to be perfectly comfortable, but something, which nobody knows of, suddenly happens, and causes a nasty accident. Is such a dwelling unfit for human habitation?

Mr. Fenton: This sash cord was apparently in a worn condition, and the Judge held that the window suddenly fell.

Mr. Justice Sankey: Do you say that if a sash cord is not strong enough to pull a window up or down that a house is not fit for human habitation?

Mr. Fenton: I submit there was evidence on which the County Court Judge could find that the premises were not in all respects reasonably fit for human habitation, and he found that as a fact.

Mr. Justice Rowlatt, in delivering judgment, said that in this case the respondent had recovered a small sum as damages for breach of the undertaking implied by statute in the letting of this dwelling, an undertaking that the premises should during the holding be kept by the landlord in all respects reasonably fit for human habitation. The evidence was that the woman, while raising or shutting the window, had her hand injured by reason of the sash cord breaking, and that was all the evidence. There was no evidence as to the condition of the cord. There was no evidence that the premises were in a bad state generally or that there was anything at all the matter. But it was said that the mere fact that the sash cord broke and the window fell on her finger proved that the house was not reasonably fit for human habitation. Now this was not a section which made a landlord responsible for every accident which happened to the tenant through something of this character going wrong in the house. The breach must be established that the house was not reasonably fit for occupation by which the woman suffered damage. Now, after the sash cord was broken, and the window could not be used, they might say that the house was not fit for human habitation. But that was too late. What the respondent must prove was that the house was not reasonably fit for occupation immediately before the accident happened by reason of the sash cord being weak. It could not be said that a house in which there was a weak sash cord which might break suddenly was not reasonably fit for occupation. When the sash cord was broken, of course, it had got to be mended, and if left without being mended, the house might become unfit for occupation. Apart from that, when they saw that the only evidence in this case was the fact of breaking, it seemed to his lordship that it had not been established why the sash cord broke. On those grounds his lordship thought the appeal ought to be allowed. Upon the other question, which was, of course, far more important, which had been argued by Mr. Hogg, whether this was an undertaking only to put into a state reasonably fit for occupation upon notice, his lordship desired to offer no opinion. Cases had been cited to the Court which certainly showed that a covenant between the parties to do certain acts of repair would be constituted in that way. The Act of Parliament in question seemed to deal with a very special class of case, and it did not seem necessary to decide the point as to notice.

Mr. Justice Sankey, in expressing agreement, said his opinion was that the appeal was successful upon the ground that there was no evidence that the house was not reasonably fit for human occupation immediately before the accident happened. Like his brother, he desired to express no opinion upon the other point raised by learned counsel.

The appeal was accordingly allowed with costs in this Court and the County Court.

Mr. Fenton asked for leave to appeal, saying it was an entirely new point.

Mr. Justice Rowlatt: I don't think we can allow leave to appeal on this point which has been decided.

Mr. Justice Sankey: The other point might be worth appeal.

Mr. Fenton: I submit that an important question is involved as to whether the dwelling was reasonably fit for human occupation within the meaning of the Act.

Mr. Justice Rowlatt: All the members of the Court of Appeal have the same things in their own houses you know.

Mr. Justice Sankey: It might happen in the Law Courts.

Leave to appeal was accordingly refused.

General.

The Kenilworth County Council propose to erect a central school for higher education purposes in School Lane.

The Canterbury Town Council town-planning scheme will provide for 300 workmen's cottages.

The Pontefract Town Council has included in its housing scheme the erection of 300 additional houses at Baghill.

The Urban District Council of Tredegar intend to erect 500 houses immediately conditions will permit.

Messrs. Martin & Burrell, architects, Durham, have been appointed by the Crook Council to prepare plans for their housing scheme.

Mr. J. Alfred Fisher has been elected chairman of Messrs. The Bells United Asbestos Co., Ltd., in succession to the late Mr. Herbert A. Bell. Mr. Fisher retains his position as joint managing director with Mr. Charles S. Bell. Major Kenneth Lightfoot, R.E., has been appointed a director of the company.

The King's School, Worcester, war memorial, is proposed to take the form of a mural tablet in College Hall, with the full roll of honour thereon. To provide the St. Wulstan's window in the series now being placed in the Cathedral cloisters as war memorials. To provide a new cricket pavilion and covered fives courts, and the balance to found scholarships.

The Bosworth Rural Council propose to erect 300 houses in all in the following districts: at Bostock fifty, Bagworth twenty-five, Barlestone fifteen, Desford twenty, Groby ten, Ratby ten, Stanton ten, Thornton ten, and in twenty other parishes an average of five in each.

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THE ARCHITECT AND CONTRACT REPORTER

VOL. C.—2609. DECEMBER 20, 1918.

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Reconstruction Problems.

THE "Daily Telegraph," in an excellent leader on Reconstruction Problems, expresses the hope that the Ministers of Munitions, Labour, and Reconstruction may not be distracted from their labours by the claims of politics, as it is necessary that they should be able to devote their whole attention to their specific duties in view of the great urgency of the issues with which they have to deal. It further points out that the necessities of war forced the State to take over great branches of private enterprise, which the Socialists are most unwilling that they should relinquish. We are told that the Government intends to take over the railways—though the country has never been consulted on the question—but the Socialists wish a similar policy adopted with regard to mines, shipping, and national workshops.

What Labour is apparently unwilling or unable to understand is that the public purse is not bottomless and that it will be as well off if it works for the private employer as it would be if it worked for the State. No community could for long run enterprises at a loss, and if it is necessary to pay expenses, which includes in the one case the maintenance of an army of officials, and in the other the employers' profit and expenses of administration, Labour will find that the system *qua* system adopted makes little difference to it.

The experience of the war is no fair criterion in this particular, because certain necessities for war had to be provided irrespective of their cost, and Labour, being human, frankly took its opportunity. The rates of wages paid to war workers have no more necessary application to times of peace than the wages paid in the reign of Elizabeth have to those of to-day—in either case the conditions which determined them are entirely different.

What does apply is the fact that production governs wages and that as long as we can increase production the workers will have a perfect right to demand a proportionate increase in their wages. The output during the war has been a surprise to everyone, and has only been possible because the Trade Union regulation of output was for the time being in abeyance, and the permanent abandonment of limitation of output under proper restriction is the one and only means of securing to all the highest wages which can be paid.

The Minister of Labour deserves every credit for his efforts in setting up the system of Industrial Councils, the formation and extension of which we are inclined to think is the most helpful sign of the times. We believe in the possibility of a permanent understanding between Capital and Labour, provided and provided only politicians would forego the temptation of making cheap promises to large classes of the community which reason should show are impossible of fulfilment, at least without injury to the fabric of the State.

But another great essential is that no body of men should undertake a burden the permanent weight of which is beyond human strength, and this is what we believe the advocates of State regulation and control are inclined to attempt. We have heard it said that Parliament is stale and overworked, but if we analyse facts we must admit that the burdens have not fallen on the shoulders of the average member, but on a small number of men who form the Cabinet, a number whose composition is unlikely to be very greatly varied by the result of an election. To them and to the departments whose administration they have been responsible for have been given almost autocratic powers and responsibilities which a Sisyphus might have refused. During the war they have had the voluntary assistance of some of the keenest business men in the country, but these men will now be taking up their private work. It is unreasonable to believe that any small body of men can permanently govern the private affairs of the nation as has been done during the war.

All reason and precedent we think point in the direction of the elimination of control and the abolition of permits at the earliest possible moment. Taking building for example, it is the laudable wish of the Government that returning labour should be provided with remunerative work, and there are important private schemes all over the country which would be pushed on with were the system of permits abandoned, and that without any urging from the authorities. If municipal and public schemes are of the first importance in the eyes of the authorities there would be little to object to if their bona-fide orders for materials were given priority over those of private owners. All we claim is that the latter should be allowed to exercise their discretion in dealing with their own plans without regulation or permits being required.

We therefore hope that the New Year may bring with it that much wished for boon, the ending of the war regulations which affect the building trade, and we shall then see reconstruction effected; but it will be a normal result of the released activities of the community and not the outcome of the theories of a few men who have no heaven-given mission to direct mankind. We should have to credit the members of our Government with the gifts of a Monte Cristo to imagine them capable of directing the commercial life of the community more wisely than has been done in the past by the efforts of men in every varied field of activity whose life-long labours have been given to a special branch. There is nothing in our past history to make us believe that such leviathans of intelligence exist in our midst, and the record of our "statesmen" shows us that they sometimes fail even in that limited and specific field which must fall within the scope of the duties of a democratic government.

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Illustrations.

THE CHARTERHOUSE STREET COLD STORAGE FOR THE PORT OF LONDON AUTHORITY.

Notes and Comments.

The Annual Report of the London Master Builders.

The London Master Builders and Aircraft Industries have issued their annual report which naturally does not cover the new situation brought about by the near advent of peace. The Association have appointed a capable organiser whose services will include besides the development of membership that of negotiation with Government Departments and public bodies in connection with all matters of interest in the building trade. The idea is a very good one, especially if the organiser has the full confidence of the Association and very considerable powers of independent action. Most "bodies" are hampered by the necessity of dealing with matters by the slow and complicated process of passing resolutions at successive meetings often largely composed of members who have not attended previous ones. Such a system often means slow and indecisive action, where there is little doubt that a single man conversant with all the points at issue would be able to do better work. Most matters of business are best conducted if they are delegated to the smallest number of really capable men who can deal with them, for most discussions at large meetings are largely composed of what is really trivial and immaterial to the issues at stake.

Red Tape in Excelsis.

We heard of an interesting example of the operation of the red tape régime now so much in evidence which if we knew all the facts doubtless does not stand alone. A certain architect, possessed both of land and the inclination to build cottages on it proposed to erect workmen's dwellings, but was forbidden to do so by the powers that be. But the same controlling authorities have granted permission to the local authority to erect cottages which they want to do on the land of the architect who is not allowed to build himself! We are not surprised that he is not greatly inclined to sell his land under the circumstances, and, as he is quite willing to make his own bricks, a very interesting position is created. Now either the cottages are wanted or they are not. If they are it is surely better for the community that a private owner should engage in a private speculation which supplies a public want than that a public authority should pledge its credit to do the same thing over the owner's head. We shall be interested to hear the outcome of what seems to us to be a most interesting example of the perversity of human nature displayed in an especially irritating manner.

Raw Materials and Employment.

The sixth pamphlet issued by the Ministry of Reconstruction deals with Raw Materials and Employment, and takes the form of a statistical review of the number of persons usually employed in the more important trades, the amount of raw material required by those trades, and the steps taken by the Department or proposed by it to ensure that the supply of material will be forthcoming. The Ministry of Reconstruction is to control metal and bricks, the War Office cement, and the Timber Controller, working under the direction of the Board of Trade, timber. With every wish to give credit to the Ministry for good intentions, we have not perfect faith in the ability of any Government department to exercise control of the kind proposed, and we believe it would be better to abandon almost every species of control exercised during the war, and to leave matters to the private agencies which usually deal with them. This is certainly the case with the building industry, the best interests of which would be met if the existing control was abolished root and branch. There might for a time be a disposition to hold up prices, but we believe that they would soon find their proper level in a community which is very tired both of omniscience and of red tape.

From War to Peace.

The pamphlet entitled "Resettlement of Civil War Workers," issued by the Ministry of Reconstruction, indicates that the process of resettlement will be a very expensive one for the country. There is to be no discharge of munition workers, though any who wish to leave will be allowed to do so. Payment by results and overtime are to be abolished in favour of fixed time rates. Minimum rates are fixed, and where these amounts are not earned the difference will be paid by the State to the employer. Unemployment donations are to be instituted on a non-contributory basis in the case of boys and girls only in cases where they attend a special course of instruction approved by the Board of Education. This donation will be payable for six months from November 25, 1918. Considering the length of time that many workers have been drawing very large wages during the war we think the authorities should have notified those in receipt of such wages for a period of time that they would have to make provision for unemployment during the period of demobilisation out of their earnings. Such a course would have been fairer for the taxpayers, who now have to pay not only the large and sometimes excessive amounts paid to munition and war workers, but a further sum in addition.

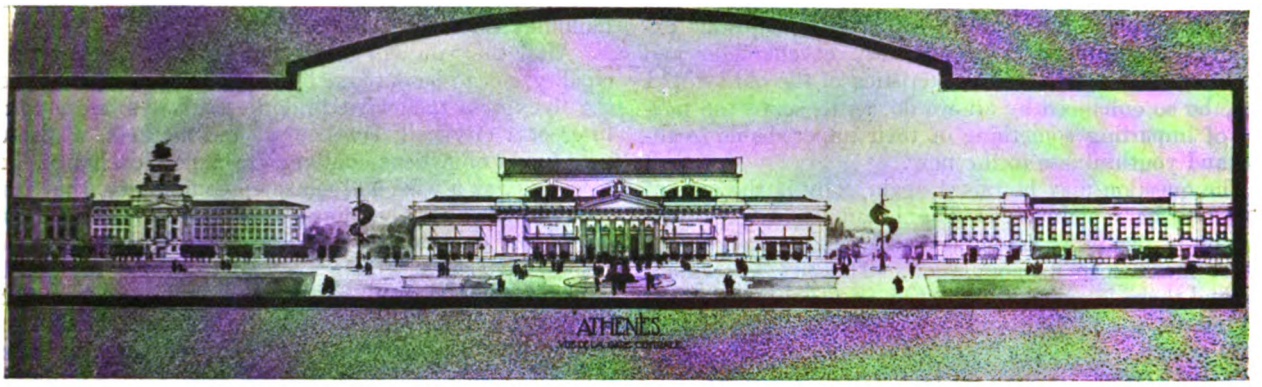
A Much Needed Reform.

Those of us who are forced to travel in tube railways realise many of the pains and pleasures of competition. We struggle to get into crowded lifts which might easily be run up and down more frequently with lighter loads. When we get near a train we are frequently immured behind bars and see the train we ought to catch, but cannot, painfully packed by shouting railway men who assure us like so many politicians there is plenty of room forward. On the trains there is always conflicting movement in opposite directions, which, under mechanical laws, tends to create a block. We believe the Companies might save themselves and the passengers by marking the two connected ends of cars either "in" or "out." One attendant could, as now, attend to the two ends of adjoining cars. At the outer ends of the train two station men would be required, but there are at present often many more regulating the scrimmage. We should remember that even the Almighty has not created rivers which flow smoothly in two opposite directions at the same time, which is what the management attempt to achieve.

Our Reviews.

We find that the exigencies of the season make it somewhat difficult to continue our Review features with perfect regularity; but this is a matter which will adjust itself by the second week in the New Year, when we shall continue the monthly Reviews which we commenced in September in addition to certain new features which we shall announce at the beginning of the New Year. It is to be hoped that it will not be long before it is possible to obtain a better supply of paper, as at present we have frequently to hold matter up which we wish to give. The operation of getting a quart into a pint pot has always been a difficult one, and no Government Department has been able to show how it can be done.

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VIEW OF PROPOSED STATION AND BUILDINGS.

Athens: Past, Present, and Future.

THERE must be in this audience many who have at one time or another had to compress into a limited space a topic, the importance of which demands years of study and unlimited time for its explanation. That is my position this evening, for I have to deal in one lecture with a city about which whole libraries have already been written and about which further libraries will be written before its interests are fully or even partially exhausted. Therefore all I can attempt is a sketch in broad outline of the salient features, leaving you to fill in such details as are needed to complete the picture.

The problems which the city planner of Athens must solve are at once unique in their importance, their interest, and their prospective possibilities. They are unique in this respect also, that any failure, whether through lack of foresight or courage in the development of the city plan, or of want of appreciation for the archæological treasures handed down from past ages, will bring upon the planner the hearty condemnation of every lover of Athens, and rightly so, for this city of all cities calls for reverent handling. It is the source from which all classic learning has sprung, and for this reason every scholar the world over rightly considers that he has a vested interest in it, which he must guard with the utmost jealousy. How did Greece come into the possession of its masterpieces of architecture and sculpture?

The ancient Confederacy of Greece consisted of a number of small States, or rather towns, such as Sparta, Thebes, Athens, and Troy, each having a certain ideal which they were continually striving to express in fine ways, and also certain traditions and glories of its own. In this connection we are reminded of the surpassing excellence of the Parthenon and other architectural treasures erected on the Acropolis and elsewhere, which are still the marvel of the ages, and the beauty of the arts and sculpture in which the Greek civilisation has never been surpassed.

Here is a slide showing the Acropolis crowned by its masterpiece as it appeared at the time of the Turkish invasion. This drawing is the work of a pupil of the Ecole des Beaux-Arts in Paris. In passing let me add that my study of the ancient remains of this wonderful piece of architecture has led me to accept this pictured reconstruction as most conscientious and accurate. The more I look at this drawing the more I admire the skill of the Greeks, which, it seems to me, was infinitely greater than that of the Romans. The difference as I see it is this.

The Greeks realised that this noble hill rising out of the flat plain of Athens must be the dominating factor in the composition, and therefore their great architects first drew in the hill itself and then began the work of suitably crowning by art that which nature had so nobly begun. There is no attempt at perfect symmetry, balance or even alignment, the whole is built up as a composition in which nature is conductor and art first fiddle. The Romans acted far otherwise, for art with them was both conductor and orchestra. The Greeks belong to the school of nature and the Romans to the school of the tee-square and compass.

The sparks of this fine idealism are still burning, and the desire to create a greater and nobler Athens is now taking possession of its children, many of whom have contributed towards the data upon which our designs have been based. His Majesty King Alexander is immersed in working out with me a great collegiate school, to be founded on the principles of the English school life. M. Venezelos gave his assistance not only as inspirer of a great movement, but as to many practical details. M. Gennadinus not only suggested the position for the new Parliament buildings, but also showed how they could be paid for. M. Bennachi, the Mayor, took a special interest in the housing of the workers, and M. Bessiardos gave invaluable aid in the development of the park system, which we think will, when complete, compare favourably with any park system in the world. Athenians are still lovers of nature, but love it best when associated with architecture and sculpture.

I always think that the citizens of Edinburgh, the Athens of the North, most nearly attained to the Greek ideal in their wonderful blending of many conflicting styles and elements of nature. This is shown in the strangely fascinating view now on the screen.

Look at this next slide, which shows the plaza-like ending of Princes Street, where it narrows into Waterloo Place, and note how the great architect Cockerill emphasised the value of Calton Hill by erecting the monument just where it strikes the central note of the picture. In the next slide we find Edinburgh losing itself in nature.

This welding of art and nature was also, I claim, the dominating motif in much of our Gothic work. Where, indeed, could you find a nobler example than in Durham Cathedral as seen from the river? There is perfect orchestration of art and nature if you like.

Before giving you the reasons which call for and indeed make imperative the replanning of Athens, we must realise something of the extent, importance, and surpassing beauty of its world-renowned architectural remains. You will realise some of the importance of this aspect of our problem when I tell you that there are to-day two Athens—the ancient and the modern. Indeed, the oldest houses were erected not more than eighty years ago, and there are only a few Byzantine churches and one or two Turkish mosques to mark the intervening decades. Here one feels the need of a historical survey, but the time at our disposal will not permit this.

Mr. Mawson then described the buildings and other features of Athens with the help of a series of slides both of the old buildings and the modern additions which have been made since the date of Greek independence. He said:

After seeing these views of ancient and modern Athens, I can quite imagine many of my hearers saying what a pity Athens has to be remodelled. Why not leave it alone? It cannot be done, you say, without some sacrifices, and I quite admit it.

Unfortunately it is the modern part of the city which

* A lecture given by Mr. Thomas Mawson at King's College.

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needs the most drastic re-modelling, in order to make it what an up-to-date city ought to be, convenient and spacious in plan, coherent in grouping, majestic externally, and impressive in its unity of character and purpose. The dignified characteristics of the old, will, I hope, be so enhanced by all we do, as to serve the purpose of imparting something of their imperishable freshness and youthfulness to the new.

The question may be raised again, why is the city of Athens to be replanned? The broad answer to this question is that it is essential owing to the phenomenal annual increase in its population. The city is teeming full, and there is evident congestion in many parts of it. Just let us see how Athens has grown during the past eighty years.

In 1834 (when the seat of the Government was transferred from Nauplia) it was only a poor village with some 300 huts of tenements, containing a mixed population of Greeks and Albanians. The increase of population may be gauged by the following: In 1870 the population was 44,510, and in 1879 it was 63,374, while in 1889 it was 107,846, in 1896 it had risen to 111,486, or, including the suburban villages 128,735 persons. To-day the population is about 200,000, a rate of growth which alone gives sufficient reason for the present town-planning movement.

To this rapidly increasing population there is the constantly augmented stream of wealthy tourists from all parts of the world, chiefly American and English, for which, notwithstanding many good hotels, adequate accommodation cannot at present be provided. Added to this there is now direct communications with Salonika, thus bringing the city within sixty hours of Paris Over and above all this is the dominating fact that Greece, encouraged by its victories in the late Balkan War, accentuated by recent still greater victories, is emerging from centuries of lethargy and pessimism into activity and optimism. No one can pass through Greece without feeling this impetus in the very soil, and to feel that the latent pride of the people is beginning to re-assert itself. This spirit animates not only the home-born Greek but every one of his compatriots throughout the world. Another factor of vast importance which calls for a remodelled metropolis is the extensive area of new productive territory acquired as the outcome of the Balkan War. This fact has resulted in an increased Parliamentary representation, and has thus made the present buildings inadequate, making possible and desirable a more imposing erection with numerous ministerial buildings on an entirely new site.

After this you will be prepared to hear that the municipality, not to be outdone by the Government, and wishing to express their civic pride in fine ways, are prepared to erect a city hall, law courts, and markets, whilst the merchants of Athens contemplate a new exchange, and, of course, as a wise and educated community, they insist that all these new buildings shall be reciprocally located on the city plan, and as units be monumental in character.

Other factors which are contributing to the remodelling of the city are the growing importance of the Piræus as a trans-Continental overland port, which, with the proposed railway extension referred to, will become the overland route to India, gradually supplanting Brindisi.

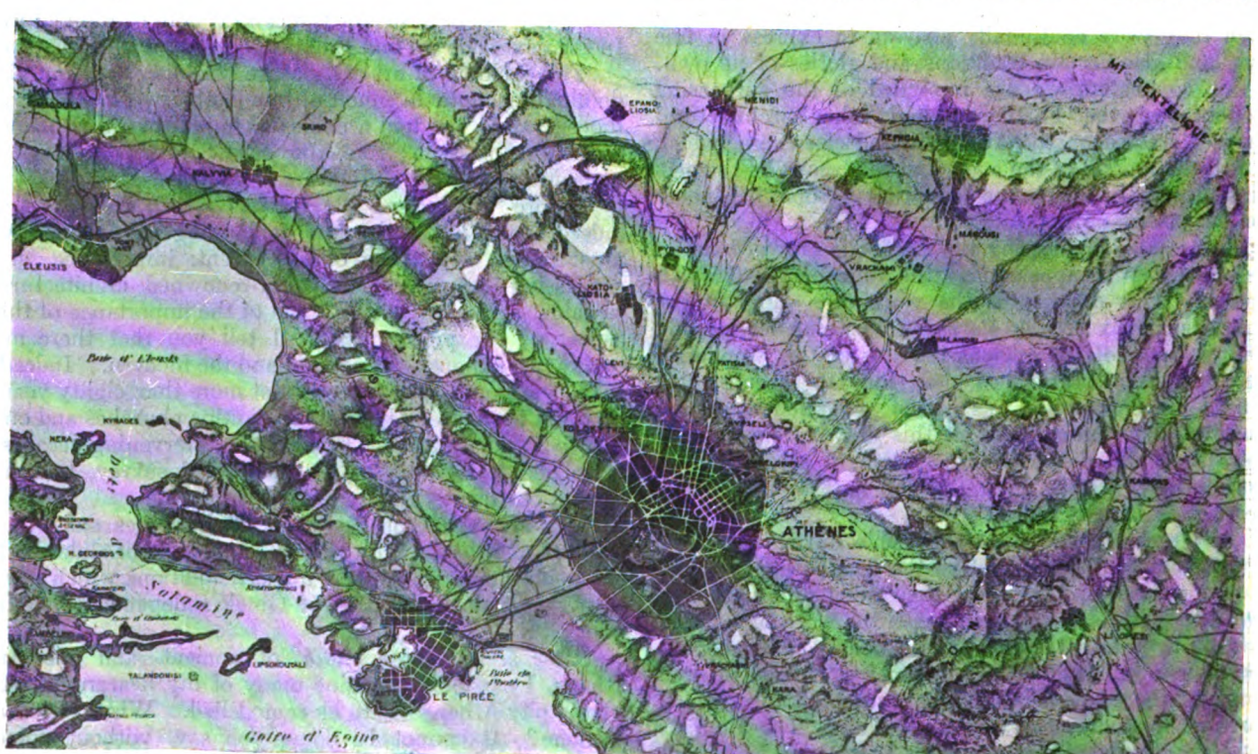
The present railway stations must, therefore, be brought together on a new and more economic site, and be enlarged with a much more ample approach. It is proposed to connect up the trans-Continental railways with the railway to the hinterland of Greece, and combine it also with the railway from the Piræus, Phaleron and Kiffissia.

A third provision made necessary by the increasing tourist's business is a well-planned up-to-date system of hotels.

One of the most important and interesting problems with which we have had to deal is concerned with the large number of small factories and workshops, especially those occupied by marble workers, which are at present scattered all over the city. These not only prevent improvement in many directions but throw on to the roads an amount of slow and heavy traffic which impedes proper circulation in all directions.

The paramount reason however calling for a complete city plan for Athens was the great desire and felt need for a boulevard park and playground system, which would be commensurate with the requirements of the city and be the expression of the spacious dignity of a metropolis. The need for shade is apparent everywhere, and therefore in addition to the park and boulevard system, a comprehensive scheme of re-afforestation is taking place on the outskirts of the city. These extend over vast areas, especially on the higher ground behind the Stadium.

Still bearing in mind the need of shade, there will be numerous small public plots with an abundance of trees



ATHENS AND ITS SURROUNDINGS

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ATHENS—PROPOSED PLAN.

and a fountain where workmen and others may rest in comfort during the long mid-day recess. There will also be a number of large open plazas, similar to the existing Place de la Concorde, where, in addition to shade trees, there will be grass, bright flowers, fountains and noble statuary.

What I wish you particularly to realise in connection with these parks is that they will not be detached units left to the chance charities of the rich, but that they form an integral and coherent part of the city plan. Without this unity the noblest architecture often looks commonplace.

The central and dominating position of the Royal Palaces, with their spacious and magnificent gardens, strike the visitor as the culminating feature of the park system, and it is interesting to note that not only are thousands of residents permitted to enter the Royal Gardens, but the general public are also permitted glimpses into their noble recesses, thus standing in direct contrast to the Englishman's garden, which must be hidden from observation.

If Athens must be replanned, on what principle must it be done? Properly understood, what we call a town-planning scheme is, first of all, a policy for controlling public expenditure in the interests of the community. It recognises that growth is the law of cities as of individuals, and seeks to control this growth. It endeavours to secure the greatest efficiency in every department of government, civic, commercial and industrial centres, and it also seeks to serve every ounce of energy which the worker has at his command, and it may be added, a city which first aims at efficiency will become beautiful in proportion as it succeeds in being efficient. The town-planner of Athens is encouraged because he has to deal with the Greek temperament, which aims at logical directness.

All the railway stations are brought to one strategic centre, ensuring economy of working and permitting of a plan in the grand manner. Workshops and factories which at present are scattered all over the city are brought in relation to the railway sidings, thus saving cost of haulage, and also of road maintenance charges. Bonded warehouses and wholesale markets also in relation to railways.

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The points of the proposed plan were described as securing an area devoted to working classes convenient to centres of population.

Civic centre convenient to Government centre and the latter convenient to Royal residences and Embassies.

Academic centre connected by great diagonal boulevards to railway centre.

Corresponding diagonal road connecting railway centre with the shipping centre, retail markets, and principal approach to the Acropolis.

Site of ancient remains from which every defiling structure or hovel is to be removed. This area you will notice in the next slide is conveniently connected with every part of the city.

Now I wish you to notice the new residential areas which, including workmen's areas, provides for an additional population of nearly 200,000.

This plan, while emphasising the parks, boulevards, and parks, indicates so much of the new plan for Athens that I do not propose to trouble you with any of the other ten plans which make up the completed preliminary scheme. To me, as a landscape architect, it is the most interesting of the series, and the part of the scheme which gives the city planner his crowning opportunities.

Now I am sure you wish to know how is that vast scheme to be paid for. Quite frankly, if Athens was as rich as one of our Lancashire towns, I would utterly despair of their accomplishing anything, but because they are poor and have necessarily to practise rigid economy, they will accomplish all I have suggested and more, for Athenians will first solve the practical problems of design on paper in a true scientific and æsthetic manner, and then, if necessary, take fifty to one hundred years to accomplish their object. If we Englishmen had to be responsible we should fail because we prevaricate, steadfastly refusing to look beyond the next municipal election, for our only chance of re-election is that we pose as economists.

I daresay you will have noticed that during the course of this lecture I have made one or two remarks which are perhaps not quite complimentary to our English towns, or to our English way of doing things. I would not have ventured on this criticism had I not felt that we are approaching a better condition of mind. It was the grand tour through Italy undertaken by our young aristocrats in the days of the Georges which gave to England the only architecture it has had since the Gothic period. We are now having another grand tour under another King George, on a much bigger and more democratic scale. Three years ago I spent a very happy Sunday in Cambridge, where for the first time in my life I saw groups of soldiers walking up and down that perfectly beautiful city, looking at and individually discussing the architecture—admiring the beauty of it, and wondering why they could not have that "sort of thing" in their own towns. These soldiers have since been to Greece, France, Belgium, and, perhaps, other countries, where they have seen things done in a finer way than ever we dreamt of in this country, and they will come back with a healthy discontent, not prepared to put up with the paltry excuse that things cannot be done here because they cost money. They will know the people have done these fine things with much less money than we possess, and they will demand their right to live a fuller life amongst more beautiful surroundings.

The first essential is for the classes and the masses to draw together again, and to recognise that both are essential for the making of the perfect city. The mutual trust and admiration which our officers and men are feeling for one another must be brought into our civic life. We want this work to have both brain and muscle and a heart in both. We need public libraries, art galleries, and parks much more than private ones, and my contact with men of the world convinces me that there is a real desire amongst the rich to contribute a larger portion of their time, energies and wealth to the reconstruction of our cities and the race than in times past.

Correspondence.

To the Editor of THE ARCHITECT.

Vitruvius.

SIR,—I have read with much interest your article on the evergreen question of Vitruvius. A new and unprejudiced edition, written and illustrated in the light of all that has been learnt since the days of Barbaro, Gwilt and Wilkins would be of great interest and value. Professor Baldwin Brown has pointed out the value of the recipes for mortars, plasters, &c., in Vitruvius as evidence of Roman practice, and possibly full of instruction for ourselves. If the student will recall that Vignola, Palladio, Inigo Jones and Soane, all different types of architects, were deep in the study of the old Roman, they may conclude that the well was not a dry one. I am glad to be reminded of Vitruvius's comparison of himself to Dinocrates; here is an unconscious plagiarism of 1822. John Nash writes to John Soane:—

"Believe me I often think upon you . . . as a proof. I have your figure now before my eyes, a thin black shadow standing on the foundation walls of the new Arcade, with arms folded contemplating the mode of laying bricks. Oh that I had such leisure for contemplation, and that some friend could describe my thick, squat, dwarf figure, with round head, snob nose, and little eyes, in such an act of contemplation, but *I* must be shot *flying*."

He was so caught in the famous cartoon "National Architecture," where he is shown impaled on the spire of his own Langham Place Church.

Soane is fond of quoting Vitruvius and was keenly interested in the difficult question of his date. He writes in a guarded fashion, but it is clear that he would place him back in republican times. Too much can be made of the dedication to Augustus and the mention of Octavia. There seems no real evidence that Vitruvius was in the circle of leading architects in Rome. He may have seen the MSS. or had extracts before him of some writings by Greek and Roman architects of reputation, from which he learnt of the "scamilli impares," and other abstruse matters, which quite possibly he himself hardly understood in their full bearings. Soane points out that his idea of the Corinthian order is only to be seen in the earliest buildings, *i.e.* Vesta at Tivoli, and believes that he knew nothing of the recent developments, such as the Mars Ultor order. Clearly, the first thing to do is to determine what are the buildings he had seen and is writing about, and to illustrate those in elucidation of his text. The attempt to fit all the Roman and Greek work into the Vitruvian scheme of orders has led to hopeless complexity and confusion. Vitruvius was caught in a war period, a point which we can realise to-day. He is practically writing his memoirs in a semi-retirement. His point of view is backwards, and his authority, as evidence on post-war developments in Rome, is very dubious. Really this should increase our interest in what he does tell us of a condition of things already passing away when he wrote.

A final word on the wonderful survival of the only book on architecture. Vitruvius must have been read in the monastic schools of architecture. Those hollow pots under the stalls at Fountains seem to me clearer evidence of an attempt to realise a hint from a book than of some survival of a building practice long extinct. Also, in the South of France the round columns and volute capitals are occasionally strikingly Corinthian, in a way which seems hardly accounted for by the assumed copying of some Roman ruin in the locality. This, at any rate, was the impression that I gathered on the spot. Bodley's hint as to the superior quality of the architecture originating in the monasteries of the learned orders is always worth recalling.—Yours, &c.,

ARTHUR T. BOLTON, F.S.A.,
Curator, Sir John Soane's Museum.

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The Charterhouse Street Cold Stores of the Port of London Authority.

THE illustrations given with this issue show the Charterhouse Street Cold Stores of the Port of London Authority, which were erected during the early period of the war on a site the nature of which rendered the building operations exceptionally difficult and complicated. As will be seen from the plans given, the buildings are carried over an intricate railway system, the nature of which affected the position in which main supports could be carried down to a foundation. The work also had to be carried on so as not to interfere with the traffic, and the loads which could be carried were defined and laid down.

As a most excellent account of the building was given in a paper by Mr. H. J. Deane, B.E. (Sydney), M.Inst.C.E., M.Inst.M.E., which was read before the Concrete Institute on April 25, which we could not improve on, we give the following account of the scheme in the form of extracts from that paper by the kind permission of the Concrete Institute. It will suffice to say that this very interesting example of construction is only one of the cold storage buildings which the Port of London Authority, with its wise prevision of the wants of London, has been instrumental in erecting for the present and future requirements of the Metropolis.

The absence of a more suitable site ultimately led to negotiations being concluded with the City Corporation for the lease of an area of about 17,100 super feet on the north side of Charterhouse Street, immediately opposite the Central Markets and situated over the railway connecting Farringdon Street and Snow Hill Stations.

The site, from an engineering point of view, is probably one of the least desirable that could be conceived. It consists of a raft or platform constructed of built-up steel girders (varying from 39¼ in. by 18 in. to 40¾ in. by 24 in. and spaced 8 ft. apart), with brick jack arches and concrete filling between. With the exception of those on the eastern side, which are carried directly on to stanchions, the cross-girders are supported on three rows of main girders of varying dimensions which are in turn supported by steel stanchions encased in concrete. The spacing of the main stanchions is governed by the position of the permanent way of the three railway companies over which the platform has been constructed, as well as by other local conditions.

The allowable loading of the platform is necessarily limited to that for which it was designed, and the terms of the lease prohibit the imposition of any greater loading than the 8 cwt. and 4 cwt. per ft. super over the areas. These limitations were responsible for a good many of the most interesting features in the design of the building which now stands upon that area. Another proviso in the lease which affected the design was the preservation of certain rights of light and air enjoyed by the London Central Markets Cold Storage Company immediately to the east of the site, and the area which had to be left free for this purpose. Had it been possible to utilise this space for cold chambers a further 18,000 cub. ft. might have been added to the accommodation.

GENERAL DESCRIPTION OF THE COLD STORE.

The building generally is constructed of reinforced concrete, faced on the Charterhouse Street side with granite and Portland stone. It has three floors, in addition to the ground floor, the cold storage chambers being situated on the ground, first and second floors, whilst the top floor is utilised for sorting and distributing of produce and for office accommodation.

The refrigerating machinery is placed at the back of the building on the ground floor level and occupies that area of the site which is limited to a loading of 4 cwt. per sq. ft. Access to the machinery room is given by means of a passage along the east side of the building, in which accommodation is also found for the storage of the ammonia bottles. The roof flat over the machinery room is of reinforced concrete construction, and access thereto is afforded by an iron staircase through a hatchway leading to the ammonia condensers, &c.

On the Charterhouse Street side is provided, under cover of the first floor, a cart area and loading bank, from whence direct communication between this and the top or sorting floor is obtained by means of lifts and conveyors. This cart area is laid in asphalte, graded so as to be readily hosed down. There is ample space for ingress and egress of traffic from the street, the gateways being fitted with collapsible "Bostwick" gates, which, when open, are housed behind the granite columns. It was unfortunate that this area could not be unobstructed by columns, but the limitations of loading on the raft made it necessary to put in columns to distribute the weight from the floors overhead to the structure underneath.

A passenger lift is provided in the stair-well for the convenience of those having business on the top floor.

The top floor, in the main, is covered by a north light roof which has the advantage of affording excellent lighting without letting in the direct rays of the sun and thereby raising the temperature of the sorting floor.

The six cold chambers are arranged so that in normal working, access thereto is obtained only from the top floor. This arrangement has great advantages in economy in running, the cold heavy air being always retained in the chambers, whether produce is being moved in or out, whereas in the old type of chamber with doors or portholes at or near the floor level the cold air pours out and warm air goes in to take its place whenever the doors are opened. Another advantage is that sorting to marks can take place on one floor where there is ample space and good lighting, and under proper supervision. The offices are light and airy, and are divided from each other generally by glazed partitions, the floors being laid in maple blocks so as to afford a non-conducting medium on top of the concrete floor, under which are the cold chambers. Heating of the offices is by low pressure hot water, gas heated. A pneumatic tube for transmission of "delivery notes," &c., connects the main offices with the small delivery office on the ground floor.

The total contents of the chambers are approximately 386,900 cub. ft., and after making due allowance for the dead loads, the total number of carcases of sheep, taken at an average of 56 lb. per carcase, which can be stored is 78,000 (equivalent to about 4.99 cub. ft. per carcase, including gangways), distributed as follows:—

Ground floor ...	...	21,700 carcases.
First floor ...	...	28,150 ,,
Second floor ...	...	28,150 ,,
Total ...	...	78,000 ,,

Tenders for the construction of the building were received towards the end of July 1912 on outline designs, specifications, schedule of prices and approximate bill of quantities prepared by the Port Authority.

Instructions were given to proceed with the work in June 1913, after detail drawings had been submitted to and approved by the Port Authority, the Corporation, and the railway companies concerned. The time for completion provided in the contract was thirty-three weeks, but unfortunately, during the period which ensued, considerable labour troubles occurred in the building trades, and this, added to other unforeseen delays, prevented the completion of the building within the contract time.

As in most building work in London, the site, except for the addition of a small portion of the public footway, also formed the contractor's yard, where all materials and appliances, offices and conveniences required during the construction, had to be placed. One of the lift wells formed a very convenient site for an electrically-operated

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temporary lift, which was retained until the space was required for the erection of the permanent lift.

The specification required the contractor to provide in his design for all columns, counterforts, and pilasters being constructed in the precise positions shown on the outline drawings, and beam construction was restricted in the main to a direction transverse to the length of the building. The walls were specified to be 6 in. thick.

In designing the reinforced concrete work the weight of the reinforced concrete was taken at 150 lb. per cub. ft. and insulating materials at 18 lb. per cub. ft.

The live loads to be provided for were 40 lb. per sq. ft. on a horizontal plane for the pitched roof (this included the dead load of the roof itself), 56 lb. per sq. ft. on all flat roofs, 1½ cwt. per sq. ft. on first and second floors, and 1 cwt. per sq. ft. on the third floor. All walls were to be considered as subject on each side to a uniform pressure of 40 lb. per sq. ft. over the whole area. The worst possible combinations of the above loadings were to be taken in arriving at the maximum stresses. Generally speaking, the methods and formulæ outlined in the second report of the R.I.B.A. Joint Committee on Reinforced Concrete, dated 1911, were to be adhered to.

The concrete for the reinforced construction was composed of clean crushed Thames ballast passed through a ¾ in., and retained on a ⅛ in. screen mixed with Ham River grit in the proportion of two to one with latitude for variation when necessary so as to ensure the whole of the voids being properly filled. The cement used was in the proportion of one bag of 224 lb. to every 4½ cub. ft. of sand, and complied with the requirements of the British standard specification, the initial set being between 50 and 90 minutes and the final set between five and seven hours.

The beam moulds were so arranged that the sides were readily removed without disturbing the bottom until the beam was sufficiently set, the camber allowed for in the moulds being 1/300th to 1/360th of the span, according to the dimensions of the beam. The column moulds were all arranged with one open side, and this was built up as the concreting proceeded. The steel reinforcing bars were of plain circular sections, having an ultimate strength of 26 to 30 tons per sq. in., an elongation of not less than 20 per cent. in 8 in., and otherwise generally conformed to the British standard specification. These bars were covered with at least 1 in. of concrete in the case of beam columns, &c., and ½ in. in the case of the floor slabs, except where such slabs were in contact with the insulation, when not less than 1 in. cover was provided.

The minimum time allowed before removing the supports from the reinforced concrete was, in the case of the main beams and floors, fourteen days, and in the other cases eight days.

The maximum test loads to be applied to the floors and beams provided for an excess of 50 per cent. over the live load for which the particular portion of the structure was designed, and the resulting deflection was not allowed to exceed 1/600th of the span.

It will be readily understood that the erection of a building of this description, which contains so much machinery and so many appliances as well as insulation of the cold chambers and cold air circulating arrangements, was not by any means a straightforward matter, and it was neessary in consequence to provide a ready means of access both for the erection of the refrigerating machinery at the rear of the building and for the fixing of the insulation, &c., inside the chambers. This was allowed for by temporarily omitting two panels in the walls of the ground floor, one adjacent to the loading bank and the other immediately opposite in the wall separating the machinery room from the cold chamber. These openings were subsequently filled up when the need for them had disappeared. In anticipation, however, of possible future difficulties in getting long scantlings into the cold chambers should the necessity ever arise, it was decided to construct a porthole in the wall adjacent to the loading bank. This porthole can readily be reopened and long scantlings passed directly through into the cold chamber from the street level, and thence up through one of the lift wells to any of the upper floors; a properly framed insulating plug is provided on the inside over this porthole, so that the insulation will not have to be cut into.

One of the noteworthy features is the way in which the loads at the front of the building are carried. Owing to the peculiarities of the design of the platform on which the building rests, the front columns supporting the building could only be placed in certain positions, which vary from 27 ft. to 29 ft. centres; although above the first floor, columns had to be provided at about 15 ft. centres to keep down the depth of the beams.

To meet this, a continuous reinforced concrete beam was constructed along the whole front, 14 ft. deep and 12 in. thick, completely filling the panel between the first and second floors, and carried on three reinforced concrete columns. Under the centre of each of the three spans a granite column was constructed purely for architectural effect, exactly similar in appearance to the granite-faced reinforced concrete columns which carry the large beam, but no weight is taken by them on account of the loading restrictions. These columns are calculated to carry a load of 355 tons, which is transmitted directly on to steel girders without any footings.

The steel columns in the cart area, referred to earlier in the paper, are continued above as concrete columns, as the necessity of reducing their dimensions to a minimum did not arise. Under London County Council regulations, this arrangement would have been impossible, as the requirements of the Building Act in respect of steel-frame construction and the reinforced concrete regulations cannot be applied at the same time in any one building.

The absence in the reinforced work of cracks due to the large divergence of temperatures to which the structure is subjected is remarkable, but is no doubt due to the effect of the insulation, although the outside of the walls is cold to the touch.

Beyond these special points there is little that calls for remark in respect of the reinforced concrete work.

REFRIGERATING MACHINERY AND INSULATION.

The system which has been installed is known as the cold air circulation system. This has several advantages over the direct expansion pipe and brine pipe systems which are sometimes adopted.

In this particular case the air circulation system reduces very materially the weight of the refrigerating equipment in the chambers, as the air ducts are very much lighter than direct expansion pipes or brine pipes would have been.

The system used is the Lightfoot Ammonia Compression system, in which the low temperatures are produced by the expansion of anhydrous ammonia. The ammonia gas, in the first place, is compressed by suitable compressors into the ammonia condensers, where liquefaction of the ammonia takes place owing to the cooling action of the water circulating over the outside surfaces of the condenser coils. After passing through a suitable regulating valve into the expansion or brine cooling coils, the ammonia is allowed to re-expand, the reduction in pressure reconverting the liquid ammonia into ammonia gas and resulting in a reduction in temperature of the expansion coils placed in trays, from which the brine is circulated over the air-cooling plates.

The ammonia compressors, which are in duplicate, are horizontal double acting with pistons 14 in. diameter and 28 in. stroke, running at a speed of 55 revolutions per minute. A total speed variation of 25 per cent. is provided for, and extra large suction and delivery valves were specified so as to allow ample margin for increase

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in output. Owing to the fact that the brick arches of the platform supporting the machines could not be cut into, and also for the purpose of distributing the loads, it was necessary to provide two heavy flywheels to each machine. For the accommodation of these flywheels, which are 10 ft. diameter and 25 in. and 15 in. wide respectively, it was arranged to cut a recess about 1 ft. deep in the concrete filling of the platform and in addition the machinery bedplates were made deeper, thus saving the extra weight of higher concrete foundations. The foundation bolts of the main machinery are carried right through the platform, and the stresses from them are distributed directly on to the underside of the cross-girders of the platform by channel irons.

The electric motors, which drive the compressors through 24 in. continuous "Roko" belting, are each 150 b.h.p. of the self-ventilating type, compound wound for a voltage of 530 continuous current, and running at 200 revolutions per minute.

Each unit is capable of keeping all the chambers at a temperature of 10 deg. Fahrenheit when the outside temperature does not exceed 75 deg.

The ammonia condensers or cooling coils are placed in duplicate on the roof of the machinery room, and each consists of about 4,720 ft. run of iron pipe $1\frac{29}{32}$ in. external diameter. Water for cooling is pumped over the ammonia condensers from trays immediately under them by two independent 4 in. electrically-driven centrifugal pumps, each capable of discharging 300 gallons per minute, and having a speed variation of 25 per cent. The coils are protected by timber louvred screens to prevent loss of water by the action of wind, and are supported directly on the trays above referred to.

The air-cooler batteries, also in duplicate, were specially designed to suit the requirements of this cold store, and each consists of a series of vertical corrugated galvanised steel plates having a total superficial area of 27,500 sq. ft., arranged over a wrought-iron collecting tray, and having above them a series of perforated steel trays, into which a constant stream of cold brine is delivered by means of an electrically-driven centrifugal circulating pump. This pump draws the brine from the wrought-steel tanks placed below the trays, in which are placed about 5,420 ft. run of $1\frac{1}{2}$ in. external diameter ammonia direct expansion coils, arranged with suitable baffles to ensure efficient circulation of the brine round the cooling coils.

Air is blown by means of suitable electrically-driven propeller fans between the corrugated plates, where it loses its latent heat and thence passes through a system of air trunks into the cold chambers, from where it returns to the batteries to be again cooled and returned to the chambers.

The fans for circulating the air through the batteries are of the "Sirocco" type, 55 in. in diameter, running at 175 revolutions per minute, each delivering about 50,000 cub. ft. of air per minute, and arranged to be driven by belt from a 20 b.h.p. electric motor having a speed variation of 25 per cent.

The delivery air trunk from the batteries, which has an internal cross-section of 10 ft. 9 in. by 5 ft. is contained in a shaft formed in reinforced concrete. Flap valves are provided for shutting off delivery of air from either battery when not in use.

There are six branch trunks connected with the main vertical delivery trunk, and a similar number to the two return trunks, for conducting the air into and out of the cold chambers. These trunks are situated on opposite sides of each chamber immediately under the roof, and extend for the whole length of the sides. The internal dimensions vary from 3 ft. 9 in. by 3 ft. at one end to 18 in. by 12 in. at the other. They are formed in $1\frac{1}{4}$ in. tongued and grooved boarding, and fitted with sliding doors about every five feet over air openings 10 in. by 8 in.

A slide is provided at the entrance to each of these trunks on both the delivery and return sides, so as to enable any chamber to be completely cut off from the cold air supply, and also to assist in regulating the supply. The batteries and vertical air trunks are insulated where they come in contact with external temperatures.

The top or sorting floor is fitted with about 2,000 ft. run of $1\frac{1}{4}$ in. by $1\frac{1}{8}$ in. iron piping for direct ammonia expansion, should it be desired at any time to reduce the temperature of this floor. The piping is divided into four sections for the purpose of control of temperatures, and is supported from the reinforced concrete beams overhead. Up to the present, however, there have been only one or two occasions on which this part of the system has been used.

INSULATION.

Before applying the insulation, and whilst the building contractors were in possession, the interior of all the outside walls except that on the east side, was asphalted with $\frac{3}{4}$ in. Limmer asphalte put on in two layers. This precaution was taken against the possibility of any moisture condensing on the insulation where it comes in contact with the concrete.

The extra cost involved was not considerable in view of the fact that it removed the risk of ice forming in the silicate cotton insulation. Should such a thing happen, the value of the insulation is seriously reduced, and great expense has to be incurred in cutting out and making good the damage, besides losing the accommodation and revenue during the time repairs are being executed.

With the exception of the insulation of the doors to the lift openings on the top floor and the doors in the partitions separating the chambers on the ground, first, and second floors, the whole of the insulation is of silicate cotton filled in between timber "grounds" and boarding.

The "grounds" of the roofs of the ground and first floors are 4 in. by 3 in. spaced 24 in. centres, and that of the second floor 8 in. by 3 in.—24 in. centres, the boarding being $\frac{3}{4}$ in. tongued and grooved first lining and 1 in. tongued and grooved second lining.

In the case of the ground and first floors, the "grounds" are 10 in. by 3 in.—15 in. centres and the second floor 3 in. by 3 in.—15 in. centres, with the first and second lining in each case of 1 in. by $1\frac{1}{2}$ in. tongued and grooved boarding.

The partitions are formed of 8 in. by 2 in. "grounds" spaced 18 in. centres, with two layers of 1 in. tongued and grooved boarding on each side. Waterproof paper is laid between the two linings in each case and the silicate cotton packed tight into the intervening space, the specified weight being between 16 and 18 lb. per cub. ft.

All insulated doors were strongly framed in pitch pine, those to the lift opening and partitions being insulated with two layers of 3 in. compressed cork slabs with two layers of 1 in. tongued and grooved boarding on each side. The emergency doors were insulated with 8 in. of silicate cotton with similar boarding on each side. The taper of the four sides of the doors was made three to one and lined with "Fearnought." The doors are hung on special galvanised iron hinges made by Messrs. Taylor, who also supplied the door-tightening gear.

The timber used in forming the insulation was best quality Burnettised Swedish white wood. After completion, the whole of the exposed timber surfaces, except the floors, received two coats of shellac varnish.

Dunnage battens 2 in. square, extending from floor to ceiling, are secured to the walls at intervals of 12 in., and removable division pillars, having suitable sockets for their reception in the floors and ceilings, are provided for separating different parcels of meat when required. These are spaced 8 ft. one way and 3 ft. the other, and are formed in 4 in. square planed and chamfered timber.

The whole of the refrigerating machinery is on the Lightfoot system, as supplied by Messrs. The Lightfoot Refrigeration Company, Ltd., of London; the insulation of the stores and the installation of the twelve special Leskole long-distance thermometers were executed by the same firm that supplied the machinery.

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The whole of the machinery and insulation is in accordance with the requirements of the Institute of London Underwriters and Lloyds, and the stores as a whole is on Lloyds' List.

Equipment.

The mechanical appliances for handling the produce consist of two vertical continuous mutton conveyors and six goods lifts.

The conveyors, which extend from the level of the loading bank up to the top floor, are of the finger-tray type, having a capacity of 650 carcases of mutton per hour at a speed of 100 ft. per minute, and are driven by five b.h.p. electric motors. At the bottom is provided a wooden table inclined towards the conveyor. The carcases are placed on the table one by one and slide down to, and are retained on stationary prongs arranged so as to miss the fingers of the conveyor trays; from here they are picked up by the next tray as it ascends, and after passing over the top pulleys are landed on a similar series of prongs at the upper level, from whence they slide down on to another wooden table on the sorting floor. From here they are collected for weighing and sorting to mark, &c., and then sent down to the cold chambers. The conveyors can be started or stopped by simple push-buttons.

Of the six goods lifts, two outside lifts are arranged so as to afford direct communication between the loading bank and the top floor, and the remaining four afford access between the top floor and the three refrigerated floors, each cold chamber being directly served by two lifts.

The travel of the external lifts is 37 ft. 9 in., and of the four internal lifts 40 ft. 3 in. Each has a carrying capacity of 3,000 lb. at a speed of 100 ft. per minute, and is operated, through worm gearing, by a 7½ h.p. electric motor, the end thrust on the shaft being taken up by double ball bearings. Automatic appliances are provided in case of rope breakage, and there are slack cable and anti-overwinding contrivances which cut out the motor if necessary.

Each cage is suspended by two steel wire ropes, which are attached to the winding drum, the whole of the dead load of the cage being taken up by cast-iron counterbalance weights attached to the drum by two similar ropes.

The cages of the outside lifts are arranged with a door back and front, the former for use at the level of the loading bank and the latter to serve the top floor. The dimensions of these cages are 5 ft. 3 in. by 8 ft. 9 in., as compared with the internal lifts, which are 6 ft. by 8 ft., the height being 7 ft. in each case.

The operation of the lifts is by small controllers of the tramcar type in the cages, the control panels, which were supplied by the Igranic Company, being placed immediately over the lifts to which they belong.

The lifts are made as nearly "fool-proof" as possible by means of electrical locking gear provided on the lift gates and at the various floors, so that the lift cannot be moved unless all gates are shut, and the gate on any floor can only be opened when the lift is at that particular floor level. The gates are of the double lattice Bostwick Gate Company's make.

Some little difficulties were at first experienced owing to condensation of moisture and rusting of the fine adjusting screws, contacts, &c., but this has now been got over satisfactorily by smothering all such parts in "Arctic" non-freezing oil.

In addition to the gates above referred to, iron fireproof doors are provided to all lift openings in the case of the internal lifts, and Kinnear patent steel rolling fireproof shutters are fixed at the lift and elevator openings at the loading bench level.

The passenger lift, which is operated by an 8 b.h.p. electric motor, has a carrying capacity of 10 cwt. at 170 ft. per minute, and can be stopped at the landing level of any floor. The machinery is similar to that of the goods lifts.

For weighing the produce on the loading bank a 20 cwt. flush weighing machine, made by Dennison, is provided about the centre of its length, and on the top floor there are three portable weighing machines, which can be moved about as required.

A number of hand trucks on four wheels complete the equipment. These are of a size which permits of their being run direct into the goods lifts, so that when no sorting has to take place the carcases can be taken in these trucks direct from van to cold chamber and *vice-versa* without further handling.

The fire-fighting appliances consist of five 2½ in. fire hydrants, one situated at the level of each floor within the stair well and one in the loading yard.

The threshold at each of the lift openings is raised 3 in. above the level of the floor so as to form a water stop which will allow of the various floors being flooded without the water finding its way down to any of the lower floors. Fixed ramps covered with chequered steel plates are provided so that the trucks can be readily pushed in or out of the lifts.

Power and lighting throughout the stores are by electricity, supplied from the mains of the County of London Electric Supply Company, who, owing to the favourable character of the demand, were able to supply current on advantageous terms. In this connection a restricted period was introduced in the terms of the supply prohibiting the use of electricity for driving the refrigerating machinery during the winter peak-load hours of from 2 to 7 P.M. between the beginning of October and the middle of March. There is no difficulty whatever in complying with this restriction, as it occurs during the period of the year when the external temperatures are low and the amount of work required to be done by the freezers is consequently very much less than in the summer months.

The whole of the work was carried out under the direction of Mr. C. R. S. Kirkpatrick, M.Inst.C.E., who early in 1913 succeeded Mr. F. Palmer, C.I.E., M.Inst.C.E., as chief engineer to the Port of London Authority, the author holding the position of chief assistant engineer since July 1913.

Valuable assistance was given by Messrs. Esplen, Son & Swainston, who acted as consulting specialists in respect to the refrigerating machinery and insulation, and by Mr. T. H. Smith, consulting architect for the building.

Note.—We have been waiting for some blocks which were to illustrate this paper, but as they have not been yet delivered we shall give them next week.

Messrs. Batchelor & Hicks, 86 Merrion Square, South Dublin, are the architects for the new premises to be built at Glasnevin, Dublin, for Messrs. A. Thom & Co., Ltd.

Builders' employés throughout South Wales have made a united application to the Master Builders' Association for an increase in wages up to 1s. 9d. per hour for hobblers and 1s. 6d. for labourers. In addition, the extension of the 12½ per cent. bonus is claimed all round.

The Halifax Permanent Benefit Building Society announce their purchase for the purpose of new offices of the imposing block of business premises in Commercial Street, Halifax, now occupied by Alexander Scott, Ltd., drapers, and others. For some years past the great extension of the business of the society has demanded much larger office accommodation than was available in their present premises in Crossley Street.

A new church is to be erected on a site in Smawthorne Lane, Castleford, through the generosity of Mr. J. D. Bland, of Kippax Park. The Rector, the Rev. W. A. Hewett, in announcing the gift, stated that through their munificent gift the parishioners would now be free to devote their energies to the erection of church hall and Sunday schools adjoining the new church.

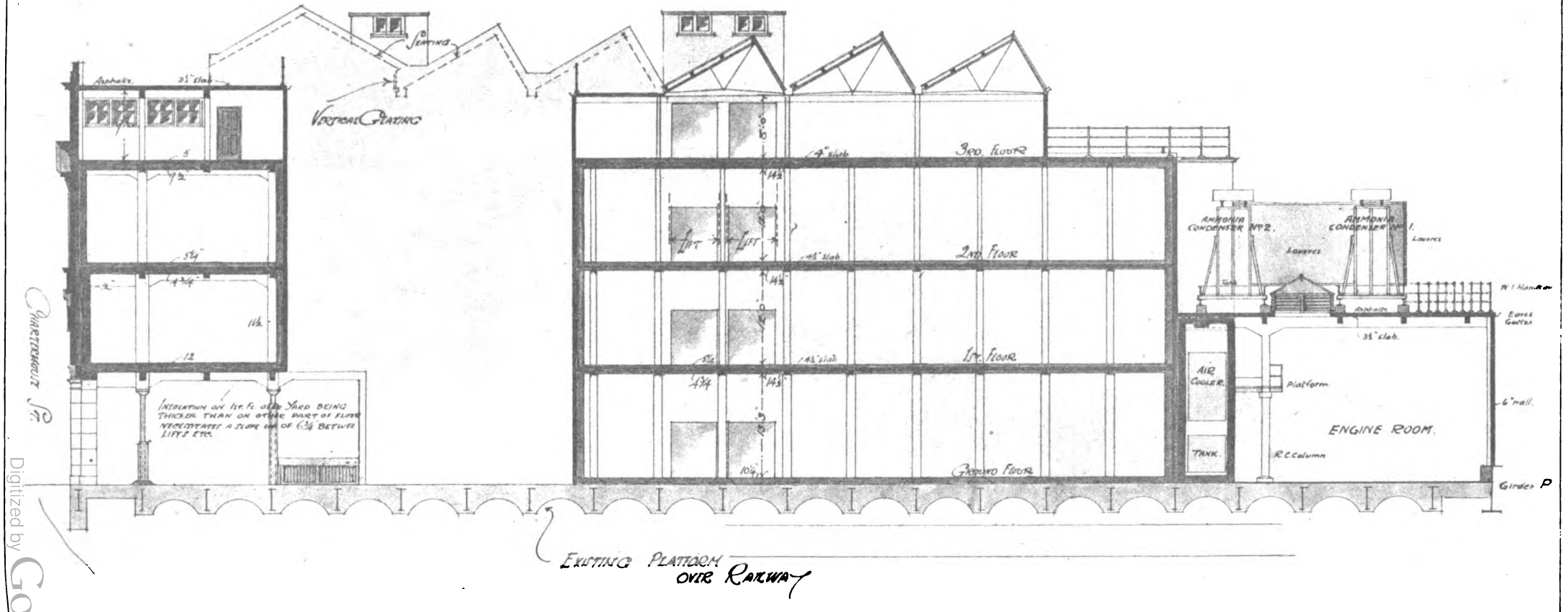
A public meeting, called by Mr. Irvine, of Drum, chairman of the Drumoak Parish Council, was held on Saturday afternoon to consider the advisability of erecting a memorial to those who have fallen in the war. Rev. Mr. Grant spoke in favour of a memorial, and proposed that a granite memorial should be erected in the grounds of the Public Library and on it should be inscribed the names of all who have fallen in the war. Mr. Chalmers, Wardmill, seconded this proposal.

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PORT OF LONDON AUTHORITY
COLD STORAGE CHARTERHOUSE ST. E.C.

Drawing No. 6
-REVISED-



SECTION ON LINE AB

The Architect, Dec. 20th 1918

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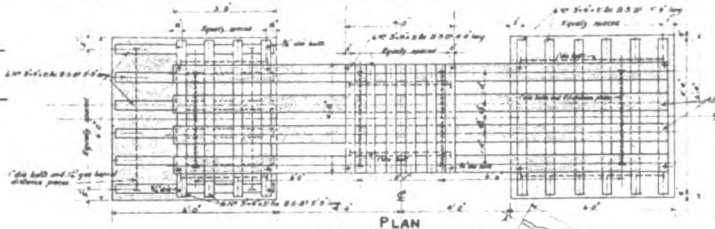
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PORT OF LONDON AUTHORITY.

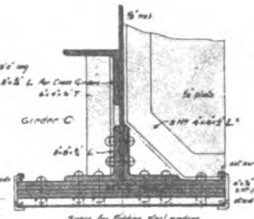
CHARTERHOUSE ST COLD STORE.

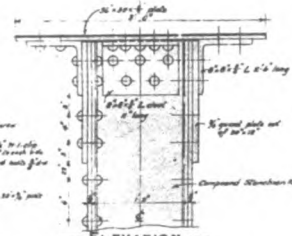
PROPOSED ADDITIONAL STANCHION UNDER GIRDER "C." OF RAFT.

DRAWING No. 2.



PLAN
GRILLED FOUNDATION
Scale – ¼ Inch = 1 Foot

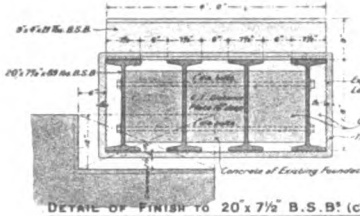




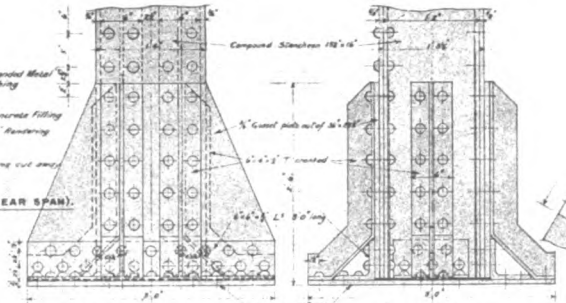
ELEVATION



ELEVATION OF STANCHION.
Scale – ¼ Inch = 1 Foot.



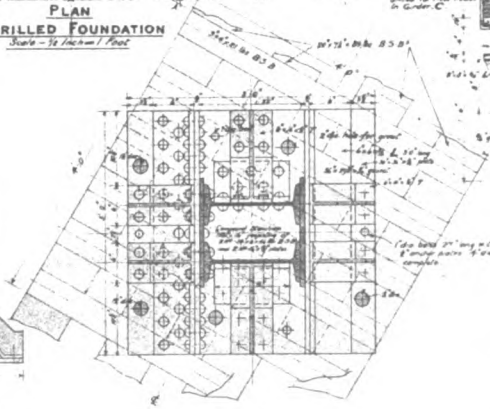
DETAIL OF FINISH TO 20" x 7½" B.S.B.ˢ (CLEAR SPAN).
SCALE:– 1 FOOT TO 1 INCH.



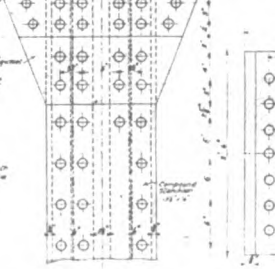
SIDE ELEVATION

ELEVATION.

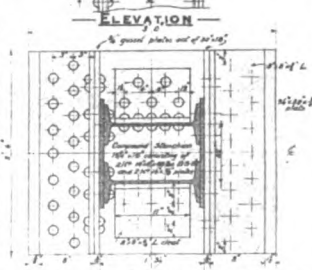
BASE TO STANCHION.



PLAN
Scale for Details of Cap and Base – ½ Inches = 1 Foot

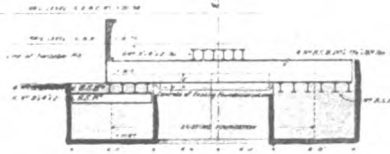


CROSS SECTION

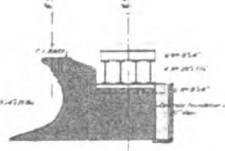


PLAN OF STANCHION CAP
LOOKING UP

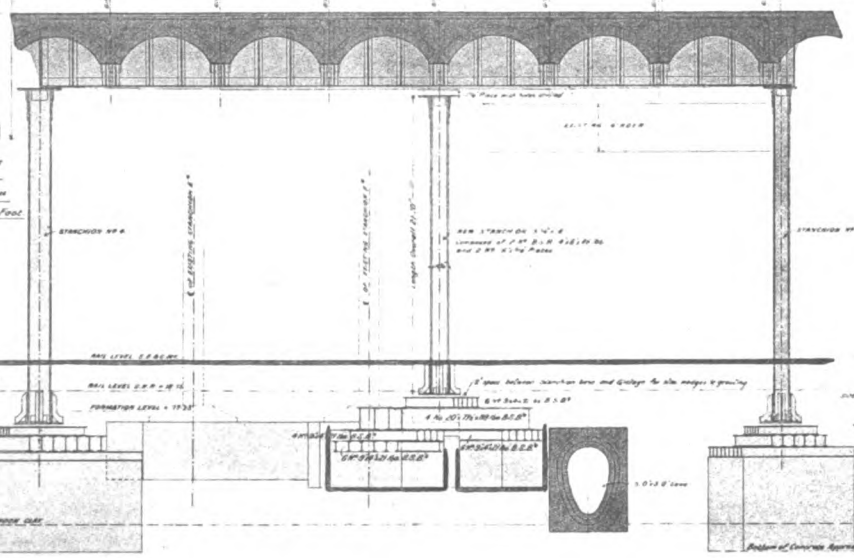
CAP TO STANCHION.



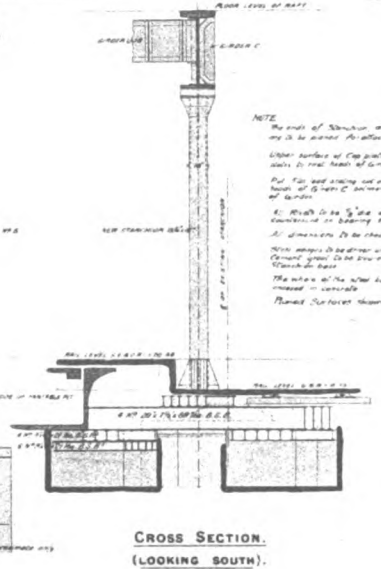
SECTION ON LINE A.A.



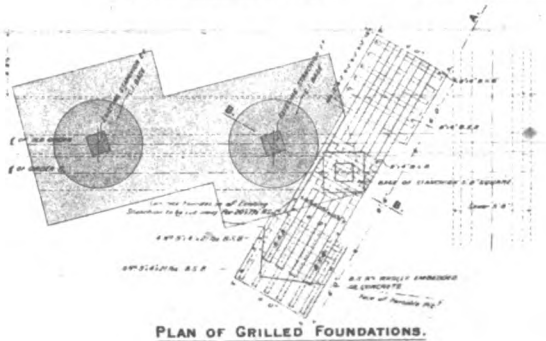
SECTION ON LINE B.B.



ELEVATION OF GIRDER C.



CROSS SECTION.
(LOOKING SOUTH).



PLAN OF GRILLED FOUNDATIONS.

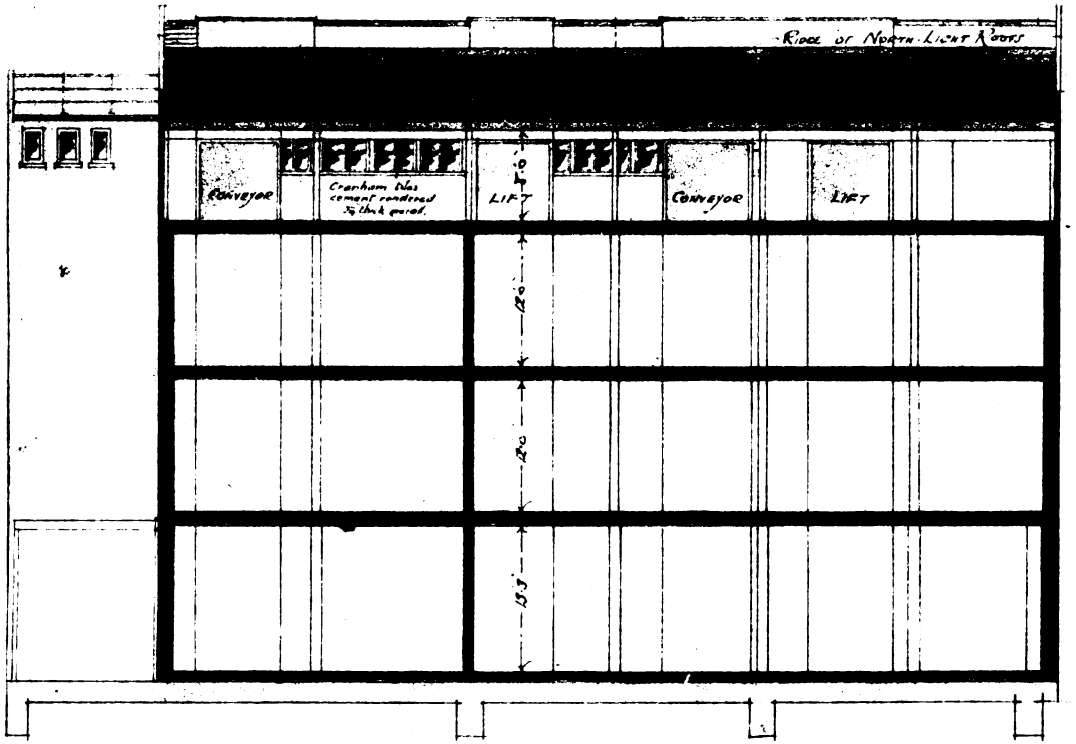
The Architect, Dec. 20th 1918.

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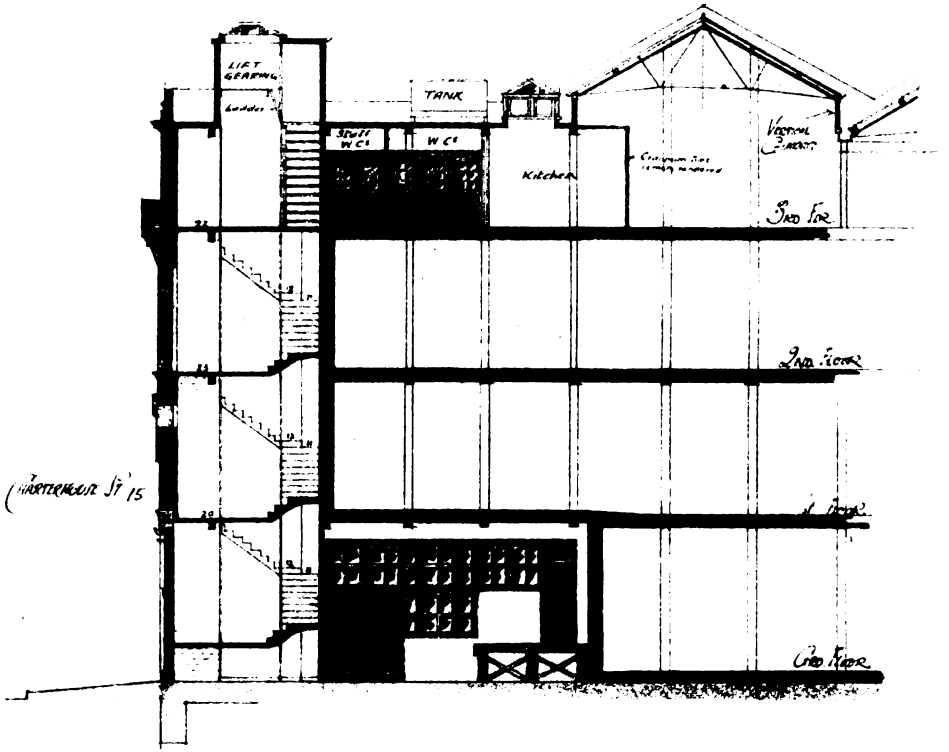
PORT OF LONDON AUTHORITY
COLD STORAGE CHARTERHOUSE ST. E.C

DRAWING No. 7
REVISED



RAILWAY

SECTION ON LINE E-F



SECTION ON LINE C-D

Colyer Architect, Dec 20th 1918.

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INK PHOTO SPRAGUE & C[illegible] 9 DEAN STREET SOHO W



INK PHOTO: SPRAGUE & Co LTD 69 & 70, DEAN STREET, SOHO W.

THE CHARTERHOUSE STREET COLD STORAGE. VIEW OF FRONT.
TAKEN AT COMPLETION, BUT BEFORE OCCUPATION.

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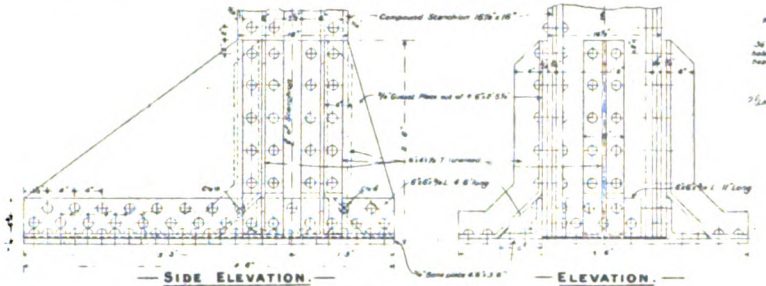
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PORT OF LONDON AUTHORITY.

CHARTERHOUSE St COLD STORE.

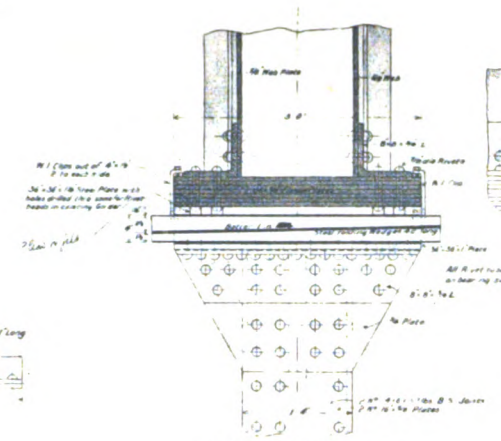
PROPOSED ADDITIONAL STANCHION UNDER GIRDER "I" OF RAFT.

DRAWING Nº 3.

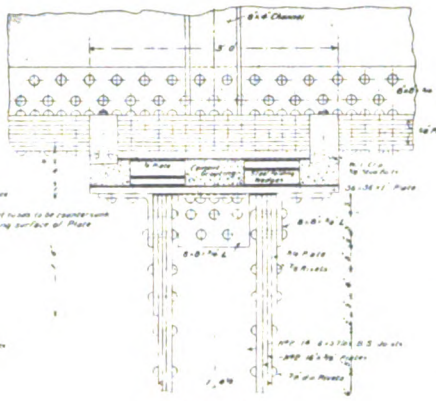


SIDE ELEVATION. — ELEVATION.

BASE TO STANCHION.



CROSS SECTION



ELEVATION

NOTE.

The ends of Stanchions and the gunnel joints are to be planed. For attachments to Cap & Base Plates.

Upper surface of Cap plate and underside of roofer plates to rivets heads of Girder I are to be planed.

Pack S'tes. found necessary put out as necessary for Rivet heads of Girder I between the Table and Flange plate of Girder.

All Rivets to be ⅞" Dia. and all heads to be countersunk on bearing surfaces.

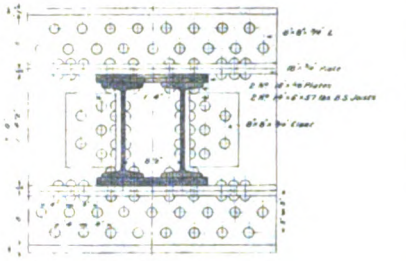
All dimensions to be checked on Site.

Steel wedges to be driven under Stanchion and left in.

Cement grout to be poured through Grout holes in Stanchion base.

The whole of the steel base to Stanchion to be encased in concrete.

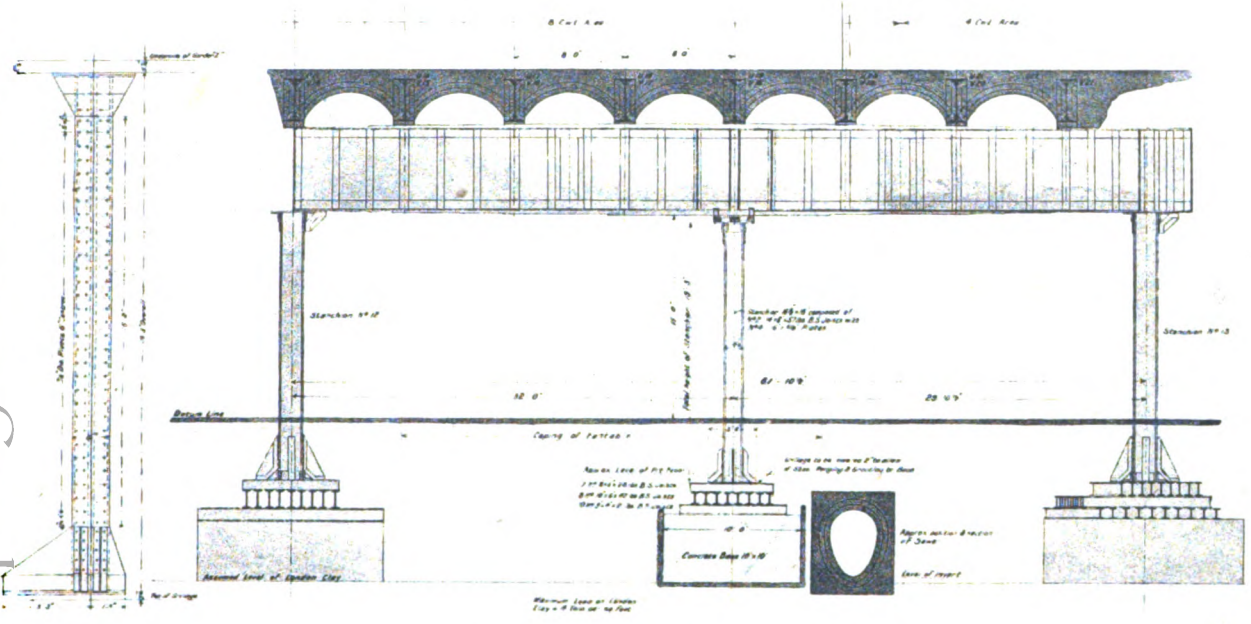
Planed Surfaces shown ——



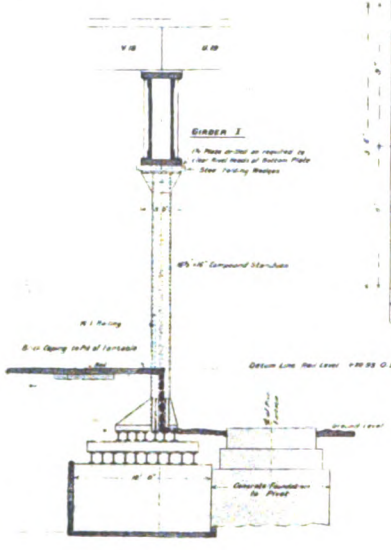
PLAN OF STANCHION CAP

LOOKING UP

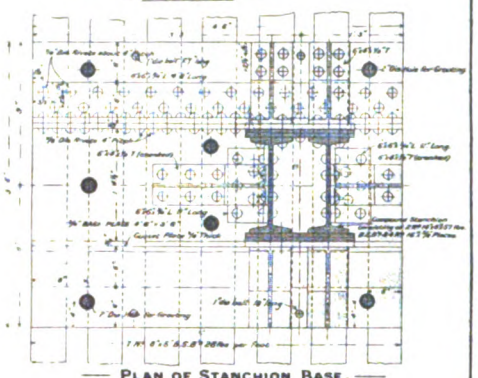
Scale for Details 1½ Inches = 1 Foot.



GENERAL ELEVATION OF GIRDER "I" SHOWING NEW STANCHION



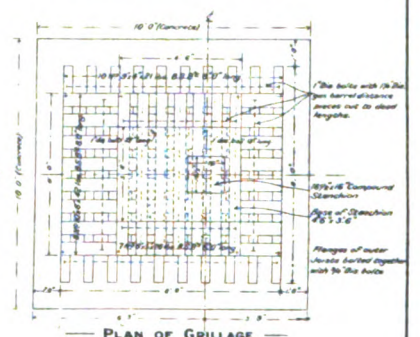
CROSS SECTION



PLAN OF STANCHION BASE.

ELEVATION OF STANCHION.

Scale ½ Inches = 1 Foot.



PLAN OF GRILLAGE.

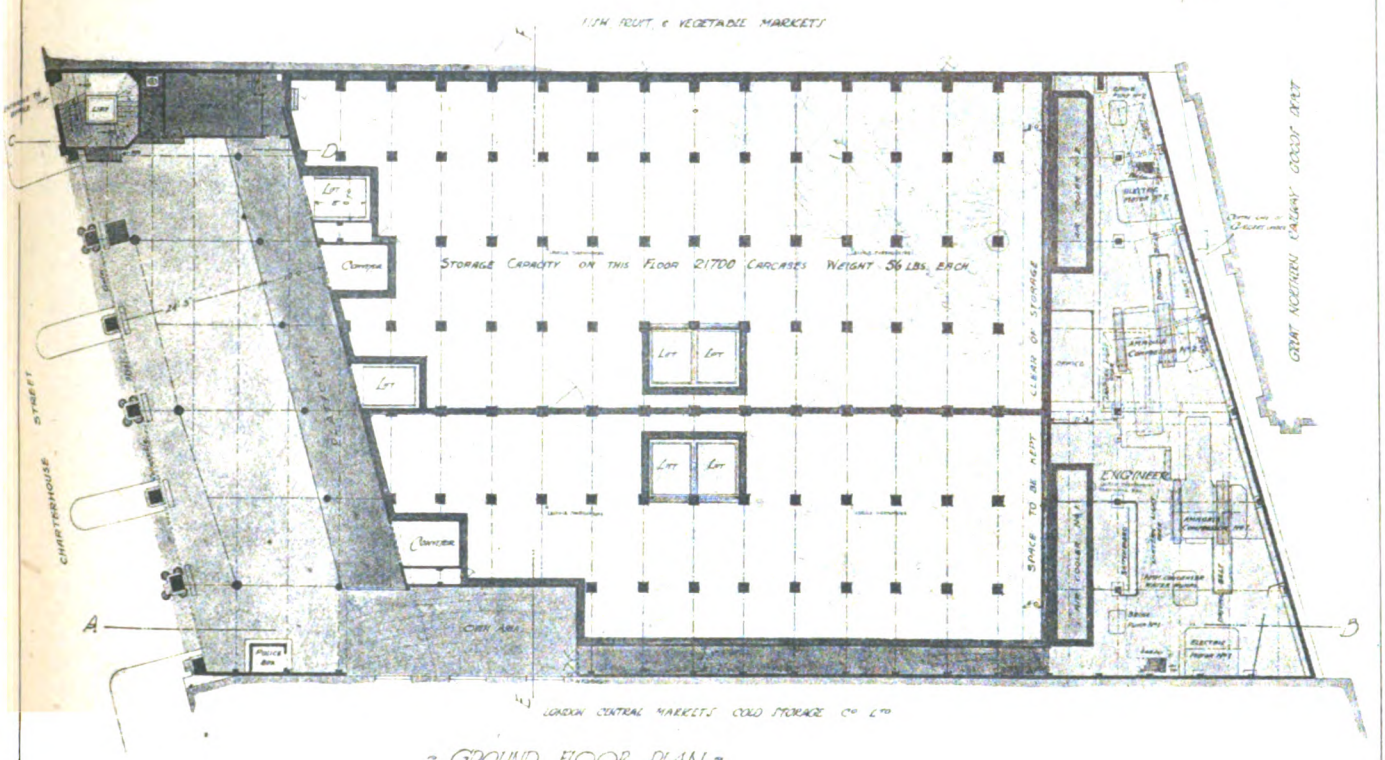
The Architect, Dec. 20th 1918.

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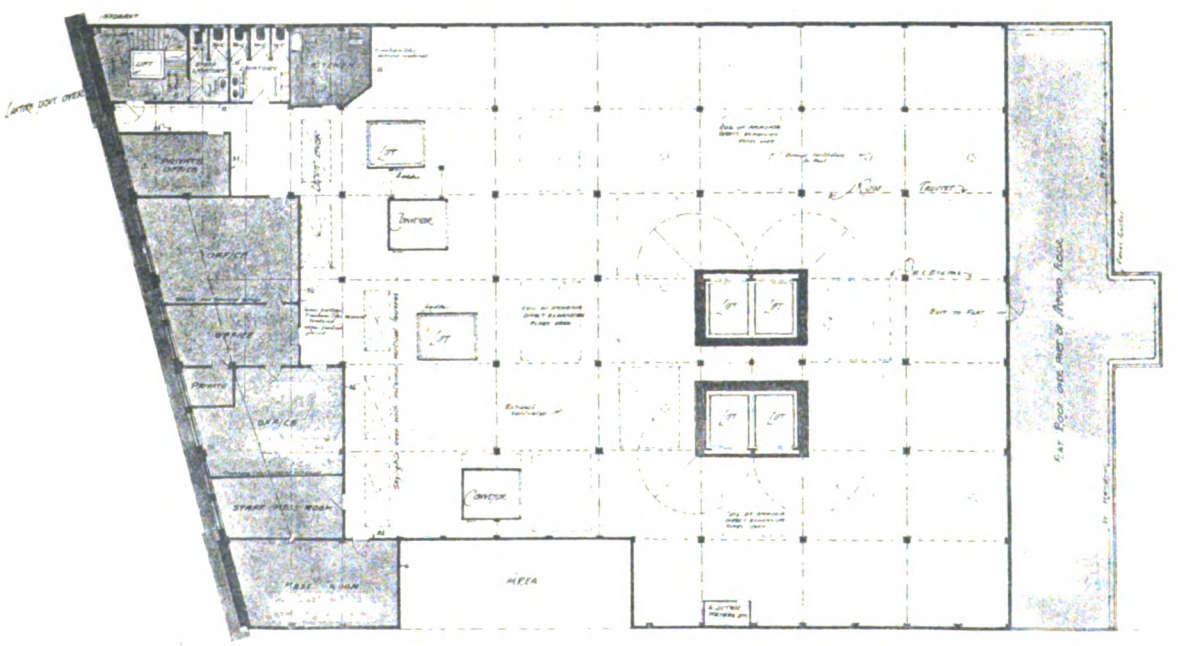
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PORT · OF · LONDON · AUTHORITY
COLD · STORAGE · CHARTERHOUSE St. E·C



· GROUND FLOOR PLAN ·



· THIRD FLOOR PLAN ·

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Royal Institute of British Architects.

ON Monday Mr. Raymond Unwin read a paper at the Royal Institute of British Architects, entitled "Housing: The Architect's Contribution." Though the whole subject of housing fell within the architect's sphere, it was especially his function to gather together the necessary parts as a magnet attracts iron filings, and to bring trained intelligence to bear on a multitude of requirements evoking order and method. Imagination and expression can only work freely when all the requirements and conditions are so thoroughly known and intimately realised that they have taken their place in the instinctive properties with which the imagination created its mental image. Our imagination shows us mental diagrams or pictures in which we can realise the relation of things, and if they are wrong a new combination can be thought out. The public have been too much in the habit of imagining that architecture could be applied to any plan instead of arising out of the plan itself. We must not consider that the architectural treatment of a cottage is an easy matter, for the requirements which have to be met and dealt with are too complex and varied. It is not the function of the architect to prescribe the life that is to be led in his buildings, but to suitably express in fitting terms the requirements which are the governing and essential facts which must be met. Not long ago it would have been safe to conclude that the family would live, cook and prepare their meals in the same kitchen or living-room. This is one mode of life still common, and provision has to be made for it both in houses containing a living-room and scullery and those to which a parlour is added. Relief is sought by increasing the size of the scullery and freeing the living-room from many of the processes connected with the preparation of food.

When the whole of the cooking and much of the preparation for it is done in the scullery very considerable changes in planning and equipment are required. Numerous combination ranges have been invented which secure for the tenants some of the advantages of both methods, while retaining the economy in cost and labour of one fire.

The cottages in which cooking is done partly in the kitchen and partly in the scullery may be described as Type 2, and the use of gas fires has done much to make such conditions possible. It is to be hoped also that some economical form of coke-heated cooking machine may be invented which will convert into cooked food or hot water the greater part of potential heating power instead of wasting it in the small scullery or allowing it to escape up a chimney. It is the place of the architect to decide for which type he is building—No. 1, with a kitchen, living-room, and scullery; or No. 2, where part of the cooking is done in the scullery and part in the kitchen; or No. 3, where the cooking is done in a scullery kitchen. It is fairly easy to decide on the best types of arrangement for Nos. 1 and 3, but more difficult to settle the compromise to be effected in Type 2.

Mr. Unwin then described and commented on some type plans. The living-room should be large, with a comfortable fireplace away from doors, with light preferably from the left hand, and there should be a table and cupboards conveniently disposed with regard to the range. The space near the windows should be as free as possible from doors or traffic ways, and in the living-room there should be room for a second table. The furniture should comprise the meal table and seats, the fireside chairs, the second table, dresser and couch for resting, and space for a piano or desk must frequently be provided. Every living-room should have, where possible, a south-easterly aspect. The scullery should be regarded as a domestic workshop, where the saving of labour should be aimed at, for a cottage is frequently run by one woman. A sink must be of the right height to obviate unnecessary stooping, with hot and cold taps and a window over it. A washing copper is usually required, with steam outlet and hood and taps for filling and emptying. The former may with advantage be filled from the hot-water pipe, especially in the case of a a gas-fired copper. A grate or stove for drying clothes should be provided, and storage or standing space for washing utensils, including a wringer or mangle. A table should be provided, and a lobby or outside porch will relieve the scullery of work and dirt. The larder must be north, and should be of sufficient size in those cases where a house is far removed from shops or sources of supply. Where no parlour exists the bathroom has frequently to be placed on the ground floor, as also in rural districts where there is insufficient water pressure it may be conveniently placed at the foot of the stairs or entered from the back lobby. In the absence of a water service it may be filled from the washing copper, which will influence its position. If downstairs the w.-c. should be entered from the back lobby. The stairs should be easy and arranged to save space. The best bedroom should have a good aspect and be large enough for the parents and one or two small children; the second should be large enough for two adults, and the third for two children, taking an approximate minimum of 500 cubic feet of air space for an adult, half that amount for a young child. Suitable places for the beds must be found out of direct draughts, but not thrust into close corners; a corner should be provided for bedroom furniture suitably placed as to window and fire, so that a chair can be placed for reading and a small writing table for children and others needing privacy.

We have not space to more than briefly refer to the leading points in a clever and remarkably well-written paper, which is the outcome of much thoughtful consideration. Mr. Unwin said: "There will be repetition and danger of monotony, but well-proportioned repetition may, with proper handling, give us rhythm. There will be the cry for change, the need of adaptation to site, and the great danger that a jumble will result, but a firm grasp of the theme may maintain the essential unity which alone gives value to variations. The architect's functions are not only to plan and arrange the house, but the garden and grouping of series of houses, laying out roads, and open spaces."

London Master Builders and Aircraft Industries.

THE following Officers were elected for the year 1919:—President, Mr. W. J. Renshaw; Senior Vice-President, Mr. S. J. Dicksee (Messrs. Foster & Dicksee, Ltd.); Junior Vice-President, Mr. F. J. Gayer (Messrs. E. A. Roome & Co.); Treasurer, Mr. G. M. Burt (Messrs. John Mowlem & Co., Ltd.). And the following new Members of the Council for the ensuing year:—Mr. Percy C. Culver (Messrs. Wm. Harbrow, Ltd.), Mr. S. Gluckstein (Messrs. Bovis, Ltd.), Mr. John F. Greenwood (Messrs. John Greenwood, Ltd.), Mr. J. Gurney Nutting (Messrs. J. Gurney Nutting & Co.), Mr. J. A. Pettit (Messrs. Brand, Pettit & Co.).

BELFAST Cathedral is to be enlarged by the building of a central crossing and two transepts as a Monument of Victory, at an estimated cost of £53,000. Of this sum £18,000 is already subscribed by legacies, &c., and appeals are being made for the balance in order to allow the work to be proceeded with at the earliest possible date.

THE decision of the Court of Arbitration with regard to the application of the men employed in the building trade in the Liverpool district for an increase in wages has been received. The men are awarded an advance of 2*d.* per hour, increasing the wages from 1*s.* 6*d.* to 1*s.* 8*d.* per hour, inclusive of 12½ per cent. on earnings. Navvies and general labourers also receive 2*d.* per hour advance.

LLANDRINDOD WELLS Council has decided to take steps for the erection of twenty-five houses under the scheme of the Local Government Board, and the clerk has been instructed to take steps as to the acquisition of one or more of the building sites suggested. Mr. Saunders, B.A., B.Sc., the vice-chairman of the Council, announced he was prepared to give an acre of land at Nantmel for the laying out of a small garden village there.

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Action for Negligence.

Mr. Pollock, High Courts Official Referee, on Wednesday, December 11, commenced the hearing of an action remitted by Mr. Justice Salter while on circuit, in which a Swanage dealer in curios, named Hayward, claimed damages for negligence against Mr. Lionel P. Way, an architect, of Swanage, who counter-claimed for professional fees.

Mr. Emanuel was counsel for the plaintiff, and the defendant was represented by Mr. Schiller, K.C.

According to counsel's statement the action related to the building of a house on a plot of land in Shore Road, Swanage. The plaintiff, who kept a curiosity shop, on May 15, 1914, agreed to purchase a plot of land in the Shore Road on which to build a house and shop. The road was only recently laid out, and there were few houses upon it at the time, and, said counsel, it would have been a good advertisement for any architect to have had the opportunity of planning one of the first houses. Mr. Way, the defendant, who was an architect at Swanage, hearing that plaintiff had purchased a plot, called upon him, and offered his services for the purpose of building a house upon it, and on or about October 14 an agreement was entered into verbally, whereby Mr. Hayward was to employ Mr. Way as architect, and the claim now made against Mr. Way was for damages resulting from alleged negligence in carrying out the agreement. There was no question as to Mr. Way having been engaged, and the only matter in dispute upon the counter-claim for fees for professional services was the amount of remuneration to which he was entitled. Mr. Way said, according to plaintiff's case, that he estimated the cost of putting up the house at £600, and that he was to be paid at the rate of 4 per cent. on the estimated cost—£12 on the production of plans, and £12 on the completion of the building, but defendant now said that the 4 per cent. was to be on the actual cost and not the estimated cost. The ultimate cost of the building was £1,118, the contract price being £1,075, the remainder being made up of extras. The plaintiff was dissatisfied, and called in another architect, Mr. W. G. Ware, of Bournemouth, who made a number of complaints, out of which the present action arose.

The defendant denied that there had been any negligence in the manner in which he had carried out his professional duties.

On the fifth day of the hearing (December 17) while the defendant's case was in progress the parties arrived at a settlement, by which it was agreed that judgment should be entered for the plaintiff for £100 on the claim and on the counter-claim also, the £100 to include the sum paid into Court. All charges and imputations were withdrawn.

Judgment was entered accordingly with costs.

Professional Defence.

The Council of the Society of Architects has recently adopted a very comprehensive scheme of reconstruction calculated greatly to increase the resources, scope, and utility of the Society, render it more extensively serviceable to its members and facilitate its work in connection with the various progressive measures of reform which it has in hand.

Some of the proposals will develop with the growth of the Society, but the chief and most important one, which is connected with professional defence, is now in operation. The Council has established, with the guidance and approval of its legal advisers, regulations enabling members in certain cases to apply to the Society for advice on points of law arising out of their professional practice and for assistance in helping them to defend cases where questions of professional principle are involved.

This scheme is an extension of the scope and power of the Board of Professional Defence set up by the Council some years ago, in connection with which the nucleus of a Defence Fund is already in hand.

It is not intended that these facilities for advice and defence in professional matters shall be available for architects' clients. These will continue to seek their own legal advice as heretofore. The Society's scheme is intended soleiy for the assistance and protection of architects as such, and it scope is restricted to architects who, being members of the Society, may have occasion to apply to their Society to assist them in protecting their own professional character, status and interests, and in promoting honourable practice.

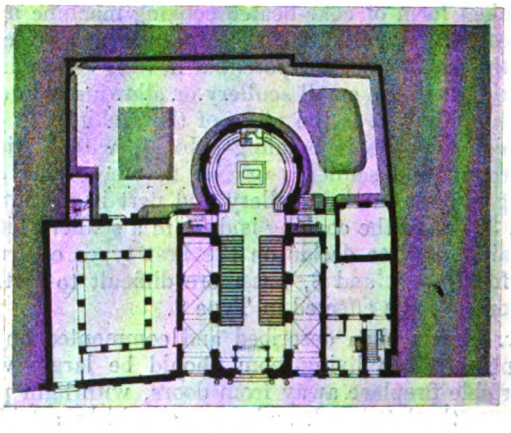
This extension and development of the Society's activities will, it is thought, be of considerable general interest, and the Council cordially invites any architect who desires to know more about the Society and its work to communicate with the Secretary at the offices of the Society, 28 Bedford Square, W.C. 1.

Paris in 1808.

NO. 11.—PROTESTANT CHURCH, RUE DES BILLETTES.

This little church, which was formerly a part of a convent, was sold with adjacent buildings and repurchased by the City of Paris in 1808, when it was appropriated to





new uses. It is a good example of quiet and simple design.

On Monday evening last Mr. S. W. Hook, Mayor of Honiton, presided over a large and representative meeting for the purpose of considering the erection of a war memorial. Three schemes were brought forward. (1) A public recreation ground; (2) a calvary in front of St. Paul's Church; (3) the erection of a town hall. Mr. Dunning offered a subscription of £100 if the scheme 3 was adopted. After further discussion it was decided to refer the three schemes, and any others that might be suggested, to a committee representative of all sections of the community. The clerk (Mr. E. W. Hellier) consented to act as Hon. Secretary, and Messrs. Reeves and Stickland as joint Hon. Treasurers.

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Trade Notes.

Great interest attaches to the question of new street lighting equipment now that the end of the war has come. Practically all the street lighting equipment in existence before the war is obsolete (with the possible exception of the latest flame arc equipment).

It is also generally recognised that the half-watt type or gas-filled lamp with its very high efficiency, excellent life and simple character will be the dominant electrical unit for public lighting. The half-watt type lamp has the advantage of surpassing in lighting efficiency all forms of arc lighting (with the possible exception of the flame arc), while it combines at the same time all the



Fig. 1.—B.T.-H. "Efracta" Lantern (closed).

simple characteristics of the incandescent lamp with freedom from moving parts or mechanism requiring attention or adjustment.

The important requisite for the effective use of half-watt type lamps is scientifically designed lighting equipment. The "Efracta" and "Diffracta" lanterns—both highly effective types of street lighting equipment scientifically designed for use with half-watt type lamps are therefore of special interest and value.

The illustrations herewith show views of the "Efracta" lantern in its closed and open position. This lantern is of substantial cast-iron construction, weather and storm proof, and is adjustable so that varying sizes of lamps can be fitted and adjusted in focus in the refractor. The lantern is equipped with the latest type of Holophane prismatic bowl (or band) refractor which



Fig. 2.—B.T.-H. "Efracta" Lantern (open).

provides the most effective combination for securing the wide angle light distribution required in street lighting service. The illustration, fig. 3 herewith, shows the characteristic light distribution given by this lantern with Holophane bowl refractor.

The illuminating engineering department of the B.T.-H. Company have given special attention to the problems of street lighting, and are able to assist all public authorities and central station companies and engineers in the preparation of up-to-date plans, data, &c., for street lighting or other lighting installations.

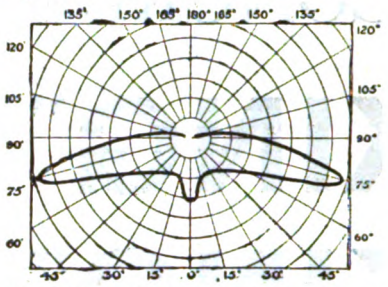


Fig. 3.—Characteristic Light Distribution of Lanterns with Holophane Bowl Refractors.

This new list No. 10401-10A/B has been circulated to all holders of the Lamp and Wiring Supplies Handbook of the B.T.-H. Company. Copies will be furnished on request to the Publication Department of the Company, at 77 Upper Thames Street, London, E.C. 4.

Some firms base their appeal to public confidence on the strength of a record of many years' standing, others on the fact that although young in years they have, by supplying a commercial want, become household words in the trading community. We can either build up confidence slowly or acquire it almost at one step. In this latter category must be placed the British Reinforced Concrete Engineering Company, which, though formed as recently as 1908, is now among the firms whose name instantly occurs to all who have to do with structures requiring reinforcement. The success of the firm is due in the first place to the excellence of the products manufactured by them, and in the second to the fact that they neglect no device by which business can be expedited. They are among the firms who have not been caught sleeping by the advent of peace, and now that war restrictions are in process of being removed they are in a position to cope with the great amount of business which their reputation insures for them.

We have received an excellently produced and well-arranged little book, the various sections of which are indexed along the outside edge and which is divided into the following sections: B.R.C. hoops, helicals and stirrups; B.R.C. fabric; B.R.C. fabric standards; index of tables; columns; stirrup tables; rectangular beams; T beams; lintols; foundations; piles; ground floors; road beds; reinforced brickwork; concrete; Joint Committee's Report and Index. A telegraphic code is also added, by means of which those at a distance can by the use of carefully arranged code words order any of the firm's goods in the space of a short cable message. The book is more than a trade catalogue and bears evidence of being the outcome of much careful scientific research and arrangement, and will be found a useful addition to any architect's library of constructional works. At the present time, when, owing to the manner in which work has been delayed through the war, manufacturers are likely to be overwhelmed with orders it is a great convenience to be able to deal with a firm who, like the B.R.C., have reduced the science of reinforcement to its simplest elements.

Under an award by the Conciliation Board, the whole of the building trade employés in the Sunderland district have received an advance of 1½*d.* per hour, and the 12½ per cent. war bonus merged into wages, the advance coming into operation at the end of the present week. The payment for bricklayers, stone masons, joiners, wood-cutting machinists, and plasterers is now 1*s.* 7*d.* per hour, making the total wages for a 50-hour week £3 19*s.* 2*d.*, while 1*s.* 3½*d.* per hour is the rate for labourers. On behalf of the building trades it is intended to make a national demand for a 44-hour week, without any reduction in wages.

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THE ARCHITECT
VOL. C.—2610. AND CONTRACT REPORTER DECEMBER 27, 1918.

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Lesson of the Year.

WITH the departing year we reach the end of one epoch of the history of the world and stand on the threshold of another, and it is to be hoped a better, one. The whole of Europe, with the doubtful exception of a very few of the smaller states, is poorer than it has been for generations, and most of the nations of Europe have a lost a heavy proportion of their most valuable lives, and hundreds of square miles of fertile and prosperous lands have been wasted and ruined, so that it will take years before what was in 1914 can be replaced, while in many cases the losses are irreplaceable. And all this has happened because governments neglected the logic of facts and would not take the only steps which would have made war impossible. Preparation by land and sea of the countries now allied before the war would have forced Germany to forgo her purpose and even compelled her disarmament. Every statesman in Europe has known for years what the German government intended, and the only doubt was as to the time at which the blow would fall and the number of the Powers who would be forced to take part in Armageddon.

Nor does this failure, in which governments other than our were responsible, stand alone. Here we had allowed Germany to exploit our national resources, to undermine our commercial system, to ruin key industries, and to gradually outstrip us in such stable industries as the production of iron and steel, dyes and chemicals. We were often represented abroad by consuls of foreign origin, and those in authority frequently acted as if it showed a wise and lofty altruism to assume that our own subjects must be in the wrong when some question affecting foreign interests arose. German diplomacy cannot altogether be blamed for assuming that the Dominions for whom we have frequently done so little in the past could not be expected to come to our aid, and that statesmen who had made efforts to placate Germany would be unwilling to join her enemies.

The lesson of the year is simply that we should consider and serve the interests of our friends rather than of our possible and potential enemies, and that the ties of affection and gratitude which bind us to our dominions should be converted into the firm constitution which will unite all British peoples wherever they may dwell, an object only to be effected by large and statesmanlike patriotism.

Having needed to the full the national efforts of our race all over the world, we should be slow to believe that we can replace it by what Lord Wolseley described years ago as "sloppy cosmopolitanism"; we should not give too much weight to such expressions as "democracy" and the "League of Nations," for the actual possession which the war has shown we may have without asking, the union of British peoples in every land, is greater than any of the shadows which are held up to our admiration by fervent speakers. If we are guided by facts and not theory we have reason to believe in the straight dealing and sense of justice of our race.

We hope that we have learnt our lesson, and we also trust that a nation which has built up its power by the enterprise of its people, working without the help and sometimes in the teeth of the opposition and indifference of governments, will not become in the future an official-ridden and overtaxed community. The war has resulted, it is said, in converting every fifth man in the community into an official; it should be our first effort to get rid of this incubus and drag upon our strength. We have no evidence that the official can build better and more surely than the private pioneers of industry and commerce who have created the power and wealth of the nation which has after all stood the stress of the greatest of the world's wars, while we have constantly recurring proof of the expense and failures incidental to the system.

The building trade and the profession of architecture have suffered heavily. A comparatively small number of contracting firms have, it is true, found constant and remunerative employment, but the statistics collected show how little regard has been given to claims which should have received more adequate attention. Government has in many cases increased, if not actually caused, labour difficulties by disregarding the experience of a body of men who were willing to place that experience at the service of the authorities.

Architects have suffered even more severely. Most of them have been without work for the last four years unless they sought and obtained work as subordinates in some Government office, and now that Government, through the municipalities, is urging on great schemes of housing it is touching on the province of yet another branch of private enterprise, the builders who up till the passing of the Finance Act of 1909-10 provided for the wants of the population. We hope that the new Government will be met at the outset of their term of office by a demand for the repeal of the Act, and that building enterprise will be free from the war shackles placed upon it. Let housing by all means be carried out if necessary by municipal action, but better still by giving facilities to the class of men who in the past have provided it without cost to the State; but it should in justice take its place among the various other branches of building which are needed by the community, paid for by them, and which give employment to both architects, contractors, and labour.

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Illustrations.

THEATRE NANCY.
HULME HALL OF RESIDENCE FOR THE UNIVERSITY OF MANCHESTER, QUAD TOWER ENTRANCE.
PROPOSED MEMORIAL CHANCEL SCREEN IN OAK.

Notes and Comments.

Building Restrictions.

Since we wrote our leading article the welcome news has been announced to the effect that all restrictions have been removed from building. During the last month we have heard many contradictory rumours on the subject, and have tried to obtain definite information from the authorities, who, as usual, have displayed a somewhat cryptic attitude in the matter. Now that permits are no longer necessary we anticipate a great revival, and believe that there should soon be abundant work for those engaged in and connected with the building trades. We hope that this step is the forerunner of others, which will enable the commercial community to exercise its own discretion in matters which directly concern its welfare. The foundation of our commercial prosperity has been based on these lines, which we believe are equally important to us in the present as in the past.

Another Standpoint.

The December number of "Colour" criticises, and we think with justice, proposals and suggestions which have been recently made. It is surprised that, at a meeing of the R.A. to consider the subject of war memorials, the proposition of one of the speakers, who urged that such memorials should have a purely artistic and not a utilitarian purpose, was not contested by anyone. Further, at a meeting of the Society of Arts to consider a scheme for the promotion of industrial art, a speaker said that the way to further British arts and crafts was "to educate the public to insist on the beautiful. At present they made a fetish of durability." We agree with the writer that the only sort of beauty that is worth having in the arts and crafts is that which is the outcome of sensible design, good materials, and sound workmanship. "Colour" is in the main right in stating that architecture is not so much a conscious aim as a consequence of good building—as literature is the consequence of good writing.

More on the same Subject.

We have been interested and amused at the statements made by some of our contemporaries in commenting on Major Pawley's scheme. It meets with condemnation as a war memorial, because it is an improvement scheme! Now we can understand that a scheme may be condemned either because it is bad or because, being a memorial scheme, it contains nothing in the shape of a memorial of the war. But we should have thought that this was the last thing which could have been urged against Major Pawley's scheme. Our criticism of which was that, as an improvement scheme, it was based on faulty lines, and the memorials proposed were too numerous. We want a single centre of interest in a picture or scheme, not a number of scattered ones such as were proposed in the scheme under review. One of the critics was condemned on his own statement, for he objected to a scheme which served utilitarian purposes or increased the values of property, and yet advocated the Charing Cross Bridge scheme, which would increase the value of property on the south side of the river, but the chief merit of which is that it would form a much needed connection between the two sides of the river leading up to a great railway station .

A National Scheme for Vocational Training.

We have received a pamphlet entitled "A National Scheme for Vocational Training for Able-bodied Sailors and Soldiers," written by Douglas Cockerell, M.B.E., and published for the Arts and Craft Society. It is a well-thought-out scheme, by which the services of returning soldiers and sailors may be utilised after short periods of instruction which tends to "bring back in an altered form the method of apprenticeship—an intensive apprenticeship of learning by doing." An example of the manner in which the principles advocated can be put into practice is given in connection with the building trades, and, as it is well worthy of careful consideration, we propose to give it *in extenso* in our next issue, as it explains more clearly than any words of ours can do the methods to be applied. We do not know if the project will be looked upon with disfavour or hostility by the various trade unions of the crafts concerned, but even if so there is nothing to prevent the experiment being tried,

A Good Report.

A Governmental Report is often a bald and unconvincing narrative of doubtful fact, but the Report on Dublin Housing, Mr. P. C. Cowan, DSc., M.Inst. C.E., which is addressed to the Right Hon. H. E. Duke, Chief Secretary for Ireland and President of the Irish Local Government Board of Ireland, is a masterpiece of clear and impartial reasoning and succinct expression. He states that the Report is not the one which he expected to write, "but the facts in the case have inexorably dictated its form." We are glad that this is so, for the fault of most political and many non-political documents is that the facts are not allowed to dictate their form, but instead we get appeals to prejudice and faction. In the Report we may refer to remarks made on the municipality of Dublin. After saying that the Corporation may be said to be as free from corruption as most other bodies, he goes on to point out that a system of government which entrusts the business of a great city to the handling of more than a million pounds a year to the nominees of a number of needy people who have direct interest in lavish and unproductive expenditure, and, so far as their limited view extends, no personal interest in efficiency or economy, and which practically disfranchises all who are steadied by the responsibilities and duties of property or of great business concerns, cannot achieve good results. It inevitably must bring about almost irreparable evils. These evils are clearly apparent, and are increasing on both sides of the Channel. Dublin is merely an example in a general movement; Sligo is an advanced case which has marked the stage of general paralysis of civic functions."

The Report a Progressive One.

The Report is not reactionary but progressive and liberal, but it is the progressive policy which is consistent with sound finance and consideration of existing rights which cannot be ignored by those who would secure the well-being of the whole community. Justice is the only thing possible in administration if we do not want to pay heavy future interest for the doubtful privilege of securing sectional support at the present moment. The recommendations and statistics given in the Report, which we shall deal with in a subsequent article, are convincing because they bear evidence of being the result of the logical consideration of facts. We doubt if a better report on any great subject has ever been written, and we are quite sure if, as we hope, the Report is acted upon, that Dublin will finally emerge from its difficulties and take its place as one of the most prosperous and well administered cities of the Empire. Mr. Cowan considers the Rebellion to have an intimate connection with the bad housing conditions of Dublin, which, from all we have ever heard, need drastic and thorough remedy, but the seriousness of the danger imposes and requires the application of great statesmanhip.

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INTERIOR, SMITHS' HALL, BLACKFRIARS, NEWCASTLE

Provincial Misteries and Companies.

IT is proposed in this and a few following articles to give some account of the misteries and companies and a few of the important towns in which their halls and buildings still remain. Of these Newcastle, York, Coventry, Bristol, and Dublin are among the chief. In many towns none of the buildings once associated with the companies remain, for, unsupported by the wealth and property which similar bodies in the City of London acquired, they died in most cases with the change in our trading customs when the legal powers of exclusive trading which they possessed were abolished by the Municipal Reform Act of 1838. In a few cases where, like the cutlers of Hallamshire and a few of the companies of Newcastle and Hull, their functions became altered in the process of time and have remained to this day, but in the great majority of cases they are now but a dimly recalled memory; while in other cases their past existence has been entirely forgotten and preserved in no records.

Newcastle-upon-Tyne.

King John granted Newcastle a *gildam mercatorium* in 1216, conferring on its citizens the usual priveleges, and about a century later a gild had come into existence the members of which belonged to three main divisions: (1) merchants of woollen cloth, (2) mercers and dealers in small wares, and (3) boothmen or corn merchants In 1342 the whole community of the town met in full gild, and agreed to articles concerning municipal government, which were confirmed by a charter of Edward III. By this time most of the inhabitants were connected with some mistery or other, and among the articles confirmed in the King's charter was one to the effect that the twenty-four burgesses who were to choose the mayor, bailiffs, and other officers, and were to share the government with them, were to be elected by and out of the "twelve most honourable, decent, and honest" occupations of misteries—viz.:

1 Merchants of Woollen cloth (drapers)
2 Mercers
3 Corn Merchants or Boothmen
4 Skinners
5 Tailors
6 Saddlers
7 Bakers and Brewers
8 Tanners
9 Cordwainers
10 Butchers
11 Smiths
12 Fullers and Dyers

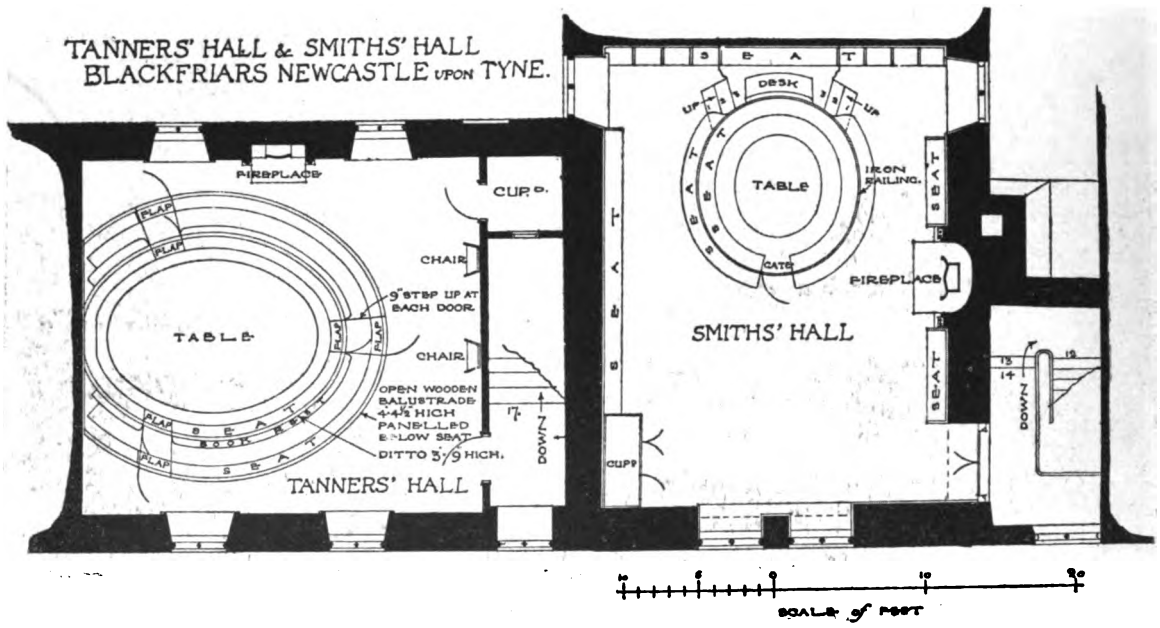
These, it will be seen, included the three companies of merchants previously alluded to, and nine of the craft gilds. These twelve bodies elected the governing body of the town until the reign of James I., when the following fifteen crafts were each given one representative as against two representing each of the twelve greater crafts. The fifteen "by-trades" were:

1 Masters and Mariners
2 Weavers
3 Barber Chirurgeons and Chandlers
4 Cutlers
5 Shipwrights
6 Coopers
7 House Carpenters
8 Masons
9 Glovers
10 Glaziers
11 Millers
12 Slaters
13 Plumbers
14 Pewterers
15 Painters

Besides these bodies who governed the town were many other crafts, the chief among whom was the Hostmen, who were originally burgesses of Newcastle, who entertained foreign merchants on their visits. In most other towns this company died out, but in London, Bristol, and other places it was enacted by statute that in every town to which merchant strangers repaired hosts should be assigned to them by the town authorities, and they should stay with them. Eventually the Hostmen of Newcastle became purveyors for the loading and better disposal of sea coals, peat coals, and grindstones, and were so recognised in a charter of incorporation from Queen Elizabeth.

The Master Mariners Society was connected with the religious gild of the Holy Trinity of All Hallows, and Henry VIII. granted it a charter incorporating its members, both men and women, "out of Love for the Trinity and for the encouragement of Navigation." Its jurisdiction was at a later date extended, including Blyth, Sunderland, Hartlepool, and Whitby. Under the title of the Master, Pilots, and Seamen of the Trinity House of Newcastle-upon-Tyne it was granted exclusive rights of pilotage and dues for lightering, bouying and beaconing the Tyne. These two last-mentioned companies were

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closely associated with the two great staple trades of coal and shipping, and the Trinity House remains to this day a powerful and influential association, exercising many of the rights originally granted it and receiving dues, while services are held every Monday in its chapel.

These two companies, together with the Merchant Adventures, who were composed of the three divisions already stated, became the most important bodies in Newcastle. The Merchant Adventurers received a charter from Edward in 1547, and flourished alongside with similar bodies in London, Hull, Bristol, Exeter, and York. The towns charter from Elizabeth recites that "the town of Newcastle is a town of merchants, a mart or market of great fame, and filled with a multitude of merchants dwelling therein and of others as well home bred as thither flowing, and there exercising their trade of merchandising."

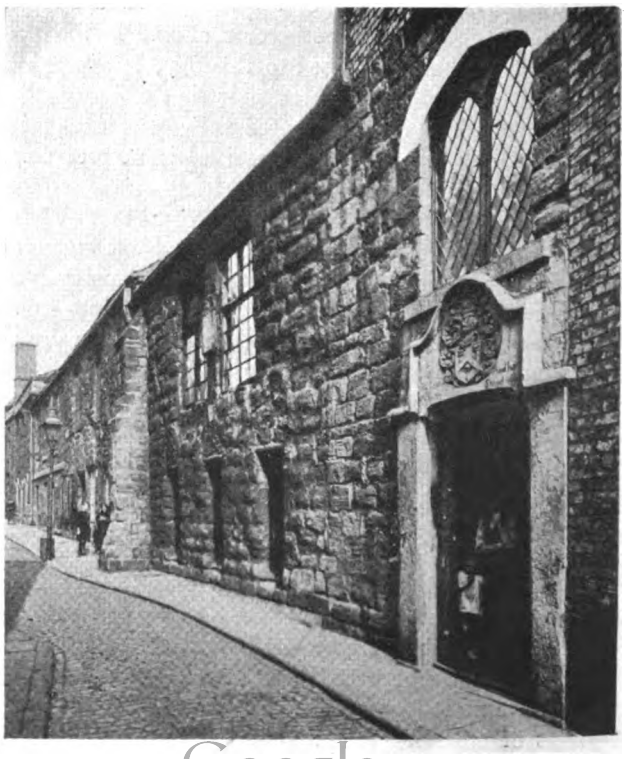
The more purely craft bodies had similar ordinances and rules to their fellows in other places, the number of apprentices a man might take was limited, and members of practically all companies were prohibited under fine from apprenticing a Scot. They were like other bodies of like nature, practically moribund when the Municipal Reform Act was passed.

The buildings of the gilds fall into two divisions—those built in the Blackfriars for the various craft gilds, and the views of which we illustrate with this article, and the larger, more architectural buildings connected with Trinity House and the Hostmen's Company, which we shall illustrate and describe subsequently.

The priory of Blackfriars was granted in 1544 by Henry VIII. to the mayor and burgesses of Newcastle for the sum of £53 7*s.* 6*d.* and an annual rent of 5*s.* 4½*d.* Besides the house itself the grant included a church, graveyard, houses, buildings, orchards, and lands together with a hall and other buildings. In 1552 the house itself and gardens were granted to the Bakers and Brewers, Fullers and Dyers, Smiths, Turners, Butchers, Cordwainers, Saddlers, Tailors, Skinners, and Glovers. All of these companies retain their properties, and most of them have their halls and meeting places within the precincts of the old priory. The Butchers' Hall was rebuilt a century ago, and the Skinners' and Glovers' Hall partially rebuilt in 1712. The views given show the curious mingling of old and newer features, and when compared with the halls of the London companies, afford interesting evidence of their comparative importance and wealth as might be expected.



CORDWAINERS, BUTCHERS, TANNERS, AND SMITHS' HALLS, BLACKFRIARS, NEWCASTLE.



ENTRANCE TO SMITHS' HALL, BLACKFRIARS, NEWCASTLE.

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BACK OF CORDWAINERS' HALL, BLACKFRIARS, NEWCASTLE.

Vitruvius on the Profession.

(*Concluded from p. 326, Dec. 14.*)

It is odd that Vitruvius, who, in Book VI., protests so strongly against the indiscriminate use of a given style in any and every country, should, through the use of his own book by the architects of the Renaissance and subsequent centuries, have been made responsible for the application of Classic forms to any and every sort of building from Italy to Scotland. A snug house with a warm aspect for the north, a cool aspect and open type of house for the south—yes, but has it always been "of course?" We cannot all indulge in the luxury of dining rooms with different aspects for different times of year, but a little elasticity in our domestic arrangements might have some of the good results anticipated by Vitruvius from the lordlier plan. Kitchens no longer adjoin cattle stalls in our country houses, nor are olive and wine-presses necessary adjuncts, but good ventilation for outbuildings, such as he insists on, will be taken account of not by the wise architect only, but by the wise landowner. "All kinds of people," the book ends, "can recognise a good piece of work, but whereas the layman cannot tell what it will be like till it is finished, the architect can appreciate the qualities of the completed building from the first." Most true, and of other things beside architecture.

The introduction to Book VII. deals largely with the existing treatises on the subject, of which, indeed, we should know little enough but for Vitruvius, who gratefully acknowledges his debt to his predecessors, but protests his own originality nevertheless. "I have not altered other men's titles and put my name to them, though I do thank most cordially the writers on whose material I have drawn. Very few treatises have been published by Roman architects, however, though their work, ancient and modern, is as good as that of any Greek, so I hope my methodical treatment of my subjects may be useful; and, having settled the question of building private houses, we may now turn to the fittings."

Concrete flooring, solid boards carefully laid, are essential to good building, and a double floor is not excessive for outdoor work. It is no good economising on your stucco, any more than on the mortar for the foundation; double walls with ventilation top and bottom ought to be used in a damp situation, and when your walls are ready for the fresco painter, see that he does not spoil them by inappropriate detail. You must allow for the effect of smoke from fires and lamps, and use flat panels of plain colours above your dadoes. Too many architects allow illusion painting of a preposterous order: "How can a reed really support a roof, or a candelabrum a decorated pediment?" Technical skill, enhanced by a wider range of colours than of yore, is no excuse for such monstrosities, and only a thoroughly false standard of criticism has made them possible. A discussion of the origin and preparation of the best colours for decorative purposes contains some statements startling to us in war time, that the true Tyrian purple, for instance, will dry up quickly unless mixed with honey, and that another fine purple may be produced by mixing bilberries with milk. At least, the modern artist's colourman does not trench upon the food supply!

Book VIII. opens with a quaint account of the importance of moisture in the economy of nature, which is so great as to deserve separate treatment in a work on architecture. "The chief requisite for life, for happiness, and for everyday use" must be prospected for, where invisible, by an examination of the nature of the soil and by lying flat on the site in question before sunrise, supporting yourself on your chin, and noting places where the mist is seen to rise. The character of the local trees will also be a useful indication, and what we may call the Gideon's fleece test will be found helpful at times. Springs may be useful or the reverse, and building ought not to be undertaken unless the quality as well as quantity of water supply has been thoroughly tested. Madness, death, dissolution of solid substances, intoxication, loss of teeth after a single draught, are among the results of rash drinking at certain springs, so that you may as well be careful. Here we come to a delightful personal touch. The son of Massinissa, King of Numidia, and ground-landlord of the walled city of Ismuc, twenty miles from Zama, was once staying with Vitruvius. "We naturally talked of literary subjects," and when the question of water came up, the royal guest told his host that there were springs in that country which caused those born there to have fine singing voices, so that slave marriages habitually took place there on a large scale to ensure so desirable a result; Tarsus and Zama itself are credited with water of the same potency. But Vitruvius is too practical to leave matters at this. If you want to tap a new water supply for a city, look at the physique of the people who use it, boil the water and see if there is any deposit, and don't begin your engineering till you have done so. Then go ahead, and divide your central water supply into three, one for public purposes, basins, fountains and the like, one for baths, to furnish a source of income to the State, and one for private houses, the owners of which will contribute to the upkeep of the water supply, and if they exceed their allowance, will not be able to draw on the public supplies as they would if there were a single central source. Reservoirs should be built at reasonable intervals, that the collapse of one may not endanger the whole, and should be planned in two or three compartments, that the water may filter through and leave its impurities behind. (The good architect leaves nothing to chance, whether in the days of Augustus or of George V.)

Books IX. and X. deal respectively with the principles of clock and dial construction and of machines in general, the first being, from our point of view, chiefly noteworthy for the *Eureka* story of Archimedes and the vivid allusions to Ennius and Accius, Varro, Lucretius and Cicero. No wonder Vitruvius talked literature with the son of Massinissa! "Posterity," says he, "will feel as if they were discussing nature face to face with Lucretius, or the art of rhetoric with Cicero. Many will discuss Latin itself with Varro, others will feel as if they were enjoying a talk with Greek scholars who have written on the niceties of that language. The truly learned lose no weight with posterity, and in the world of letters bodily absence is no bar to influence." Here surely is an unconscious and apparently unnoted tribute to Augustus. How many absolute rulers would endure to have the works of an opponent like Cicero treated as immortal, their value recognised as a matter of course, in a book dedicated to himself? We are reminded of that other story of the little prince trying to hide the Cicero he was reading from Augustus, and being told not to be absurd, as he was a very great man. Such magnanimity explains the affection and admiration of greater men than Vitruvius, of Virgil for instance, that noblest singer of

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the Augustan age and policy, and of Horace, who to preserve his own independence could refuse to be the Emperor's secretary and yet remain his friend.

By comparison, then, the last two books of Vitruvius are unprofitable reading to the modern, but the introduction to Book X. makes large amends. At Ephesus, we learn, an architect accepting the charge of a public work is bound to make an estimate which is held by the authorities, and to offer a pledge on his property, till the work is done. If the contract is carried out within the estimate he is rewarded; if less than a quarter has to be added it is paid out of public funds and no questions asked; but if the cost exceeds the estimate by more than a quarter, his property has to furnish the balance. "Would to Heaven this were a Roman law too," cries Vitruvius, "and that for private buildings as well as public"! As things are, the wrong men get the commissions, gentlemen are misled into squandering vast sums, and are too often broken, in fortune and in spirit, by an increase of 50 per cent. or even more on estimated charges. In the absence of a legal remedy, the best security against such disaster is the careful working-out of plans before a single step is taken in the actual construction, whether the building in question be a permanent one or a temporary show, gladiatorial or otherwise, provided by the magistrates. The details of the machines themselves, which range from hydraulic organs to battering rams, hardly concern anyone but an archæologist, but there is one exception. The hodometer, "an ingenious invention which enables us, while sitting in a carriage or sailing on the sea, to know how many miles we have gone," is a clumsy predecessor of our speedometer (shade of Varro, what a word!), an arrangement of wheels, connected in the case of the carriage with two hollow revolving drums filled with stones, attached to the wheels and dropping a stone for every mile covered, or on board ship by means of wheels with float-boards attached which, as the ship goes through the water, set in motion a similar drum attached to the axle which runs through the ship from side to side, and causes the stones to fall into a bronze vessel. "Every time the turning of the horizontal drum brings a stone to a hole, it will let the stone out . . . and thus . . . the length of the voyage will be shown in miles." The serious additional weight on the horses necessitated by a long journey by land does not seem to have occurred to the anonymous inventor.

The work ends with an account of the services of architects in various sieges, and with the statement that the entire work contains every branch of architecture explained in ten books. A more practised writer would have allowed it to end on the preceding sentence, an eloquent protest that the freedom of States has been preserved by the skill of their architects, but the very lameness of his conclusion seems to show us Vitruvius himself more plainly, the trained architect with an amateur passion for literature, not worldly-wise enough to get to the top of his profession, not unscrupulous enough to push himself and elbow his competitors out of the way, but perfectly sincere and simple in his desire to do his subject justice and to purify the architecture of his country on the soundest principles of taste and honour.

Note.—The translated passages in this paper are usually based on, or abbreviated from, the admirable translation by the late Professor Morgan. (Harvard. 1914.)

Katharine A. Esdaile.

At a meeting held last week in the Heworth Schools, York, various proposals were discussed for a war memorial. Several met with little support; the two most favoured were: (1) that there should be a memorial in Heworth Parish Church in honour of those Heworth parishioners who have made the great sacrifice during the war; (2) that a parish institute or recreation room should be erected in honour of all from Heworth who have served in his Majesty's Forces during the war. A special committee was appointed to decide on a scheme and to obtain subscriptions.

Henry Saxon Snell Prize.

The subject given in 1918 for the Essay in the competition for this Prize was "Suggestions for Improvements in Apparatus and Appliances for Dealing with House Refuse."

The Essay to include a description of practical methods for:—

(*a*) Reduction in the quantity of refuse in the house.

(*b*) Destruction of refuse in the house.

(*c*) Utilisation on the premises or sorting for utilisation away from the premises.

(*d*) Temporary retention on the premises.

(*e*) Methods of collection from the premises, including the construction of collecting vans.

Thirteen Essays were sent in, and they have been brought under the consideration of the Council.

The Adjudicators for the competition were:—

Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A., Chairman of Council.

J. Patten Barber, M.Inst.C.E.

H. Percy Boulnois, M.Inst.C.E., nominated by The Institution of Municipal and County Engineers.

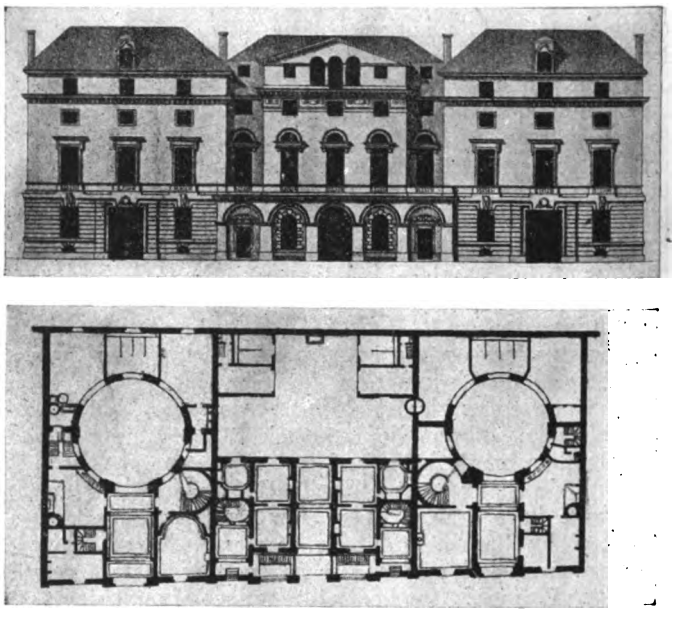
A. G. Drury, M.Inst.C.E., nominated by the Local Government Board.

Louis C. Parkes, M.D., D.P.H., M.R.C.S.

Acting upon the advice of the Adjudicators, the Council have awarded the Prize of Fifty Guineas and the Bronze Medal of the Institute to the author of the Essay, writing under the motto "Ædile," James Jackson, Superintendent, Refuse Disposal Department, Birmingham

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Paris in 1808.



19. THREE HOUSES, RUE SAINT GEORGES.

This is a good example of three houses designed to form a general composition. M. Bellanger built them in 1788. Stabling is in each case arranged in rear of the buildings and reached through the large central entrance to each house.

At the last meeting of the Atherstone Rural Council the surveyor reported that he had been instructed by the Atherstone Committee to prepare plans for the erection of forty-eight houses on the Innage Close site. He wished to say that at present it was impossible for him to proceed with the work because he had no assistance at all in his office, and had to do all the clerical work himself. He understood that Mr. W. S. Ellis (his former assistant) would be at liberty early in the New Year.

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The Royal Sanitary Institute.

REPORT ON HOUSING.

IN view of the large measures of housing construction now under consideration, and the desirability of reducing cost in any way that can be done without foregoing essential sanitary principles, the Council appointed a special Committee, consisting of:—

Sir Henry Tanner, C.B., I.S.O., F.R.I.B.A. (late Principal Architect to H.M. Office of Works),

Mr. H. Percy Boulnois, M.Inst.C.E. (late Engineering Inspector to the Local Government Board).

Professor A. Bostock Hill, M.D., M.Sc., D.P.H., County Medical Officer of Health for Warwickshire.

Mr. H. D. Searles-Wood, F.R.I.B.A.

Mr. J. Osborne Smith, F.R.I.B.A.,

to consider any simplification of construction and sanitary arrangements of rural houses which would tend to reduce cost.

The following report has been submitted by the Committee, and adopted by the Council:

General.—Roads, fencing, gardens. *Planning and Arrangement.*—Standardisation, staircase, bathroom, food store. *Materials and Construction.*—Timber substitutes, walls, floors, roofs, chimneys, windows, plastering. *Equipment and Fittings.*—Wood fittings, sanitary fittings, hot water, cooking stove, water supply. *Working Conditions.*—Disposal, sewage, waste water, house refuse. *Repair of old Houses.*

Your Committee has had under consideration the terms of the reference to it, and finds that so much of its report would apply equally to urban housing that it has extended its observations to cover buildings of that description.

It is of course important, in order to secure good housing, that the number of houses to the acre should be limited; but the conditions upon which this number should be determined hardly come within the scope of this report.

In laying out a building estate for houses of this character, the arrangement of roads and footpaths and their construction are items which have a considerable bearing on the cost of the houses. The traffic upon them is usually light and infrequent, and a narrow road about 12ft. wide is all that need be metalled, and there should be 5ft. paths of gravel or tarpaving, separated from the roads by grass borders, making 40 ft. between the fences. Fences between the gardens can be largely dispensed with and privet used to indicate the boundaries.

Economy is chiefly to be sought in the selection of the type of house and in the form of construction, though to some extent the cost may be affected by the by-laws of the local authority requiring the employment of unnecessarily expensive materials and involving excessive labour. The Local Government Board has drawn the attention of local authorities to the need of amending by-laws, and it is understood that those now in force are to be annulled and new by-laws substituted.

PLANNING AND ARRANGEMENT.

Standardisation is desirable within reasonable limits as a method of reducing cost. For instance, the same plan can be adopted for a large number of houses, with slight modification in the external design to prevent montony, and also modifications to provide several degrees of accommodation.

Bricks, tiles, slates, piping, taps, baths, sinks, etc., are standardised and it would be easy to extend such arrangements to items made of concrete, as steps or thresholds, window sills, etc.' also to door-frames and windows in which the sashes or casements might be of one size, there being one, two, three, or four lights. There might be several standard patterns of ranges and fireplaces. ...

Staircases.—The adoption of one-storey houses would avoid the necessity of staircases, incidentally leading to an economy of some 12½ per cent. in the cube, and the consequent saving of wood in the stairs as well as joisting and boarding to the first floor. One-storey buildings, without reducing the area of the rooms, cover a very small additional area of ground, which can make practically no difference when the proposed number of houses to the acre is limited.

Bathroom.—The position of the bathroom is of importance as affecting cost. It should be as close as possible to the source of hot-water supply, and preferably on the ground floor in order to save a large amount of piping, and to avoid the use of pressure boilers, with the periodical expenditure for cleansing and repairs.

If the bath is arranged on the upper floor a pressure boiler or geyser is needed to supply hot water, and a good deal of extra expense is entailed for fitting and maintenance. This should therefore be avoided as a measure of economy.

Water-closet.—This should if possible open off a well ventilated back lobby, but where this cannot be arranged it should open from outside, whether inside the house walls or in an outbuilding. The approach should be under cover and screened from observation.

Food Store.—This should be kept as far away as possible from the water closet or dust place, and be entered from the living-room or lobby rather than from the scullery. A floor space of about 12ft. is desirable. The window should face the north or east and extend to near the ceiling, and have inner fly-proof wire gauze and frame, and a ventilating opening near the floor similarly protected. The walls should be rendered smooth in cement, and there should be shelves of slate or concrete, and the floor should be of granolithic.

MATERIALS AND CONSTRUCTION.

Timber substitutes.—The short supply of timber and its excessive cost necessitates economy in its use, and the adoption of substitutes for which cement concrete and steel can be largely employed.

Walls.—The adoption of any particular form of walling must depend largely upon the materials that can be obtained in the immediate neighbourhood. Where bricks are cheap it is doubtful whether any other material can compete, but where sand and suitable aggregates are to be obtained concrete blocks or slabs may prove to be cheaper. They require to be carefully made, and must be submitted to considerable pressure to be satisfactory. Generally it is more economical to obtain concrete slabs for walling from a factory where they can be made under pressure and of uniform sizes, and supplied of superior make and more cheaply although the cost of transport has to be added. This argument applies more particularly in the case of a few isolated cottages.

A 9-in. brick wall cannot be depended upon to resist driving rain, and must in nearly all cases be rendered outside or rough cast with cement and sand. Outside walls should be built in cement in the proportion of one of cement to six of sand, and the less exposed surfaces may be left uncovered.

Stone walling is not usually so economical as brickwork.

Floors.—The ground floor should be of concrete not less than 4 ins. thick, and the proportion may be one of cement, three of sand, and six of aggregate, and should be laid on six inches of hard dry core of some kind, such as dry rubble, brick rubbish, or chalk. For the scullery, bath place, etc., the floor should be finished with 1½-in. granolithic. This, however, is not usually considered satisfactory for the living room. For urban housing this room may be floored with some form of covering laid *in situ* on a waterproof mixture and composed of sawdust, cement, asbestos and magnesite, but great care should be taken to keep all metal away from this material. For rural houses this is hardly suitable, as it would be costly perhaps to lay, and certainly to repair. The better covering is probably some form of tile laid on 2 in. of well rolled tar paving in place of the concrete. The floor for an upper storey would in ordinary circumstances be of wood, and it is difficult to suggest any alternative which would effect economy even at the present price of timber. There should be a space about

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5 ft. to 6 ft. wide at the back of the house paved with 3-in. to 4-in of granolithic.

Roofs.—Should be so constructed as to protect the house as far as possible from variation of outside temperature. The pitch should be kept as flat as possible to economise timber. Slopes of 30° are suitable for slates, asbestos slates, bituminous sheeting, or other similar coverings. Tiles, however, require a pitch of 45° or thereabout and heavier woodwork, and are consequently more expensive. The lower pitch with either slates or asbestos slates is suggested. Ar alternative would be reinforced concrete. Dormer windows, valleys, and internal gutters are to be avoided as they give rise to considerable expense.

Bituminous sheeting and similar materials form good covering, but require attention and have a shorter life.

Chimneys.—Flues need not be larger than 9 in. square; they should be carried up to at least 3 ft. above ridge, and the top flaunched to throw wet off. In exposed positions, the brickwork above the roof should be rendered or rough-cast in cement.

Windows.—The sashes should extend to within 6 ins. of the ceilings and to within 2 ft. 6 ins. or 3 ft. of the floor. The glass areas should be not less than one-sixth of that of the floor in the living rooms, and not less than one-eighth in the bedrooms. Solid frames should be grooved all round, built in, and the grooves thoroughly filled in with cement mortar to form tongues. Casements should open outwards and fanlights should be hung at the top.

Double hung sashes have some advantages over casements for ventilation. All sashes should be made to open, and due regard be given to the cleaning of the glass.

Plastering.—Ordinary lime plastering with 10 per cent. gauging of Portland cement executed in two coats is better than any patent plastering, and is also cheaper. Patent plastering is hard, and the character of the surface favours condensation.

Equipment and Fittings.

Wood Fittings.—Dressers can be omitted, but there should be shelves in the scullery, and also a cupboard with shelves and hooks. There should also be cupboards in the living room and in each bedroom; all should extend to the ceiling. Picture rails should be provided to prevent damage to the walls.

Sanitary Fittings.—The bath should be cast-iron, porcelain enamelled inside. Economy may be effected in cost, floor space, and hot water by having it only 5 ft. long, which is quite sufficient. An overflow and waste should be provided 1½ ins. in diameter.

The scullery sink should be of fireclay 10 ins. deep, with lifting plug to waste. It is essential and also economical to provide all taps of good quality.

The water-closet pan should be of fireclay not less than ¾ in. thick, white inside. The seat should be of deal painted white, both top and underneath, or birch painted underneath and well oiled on top to prevent absorption, and should be hinged. The flushing cistern should be of simple construction, easily actuated, and of good quality. The use of the above fittings is only appropriate where there is a public water supply and drainage.

Hot Water Supply.—It is very desirable that a supply of hot water should be easily obtainable. It can be provided (1) by a portable washing copper or galvanised-iron boiler with draw-off tap; (2) by a range with washing copper attached, and (3) by a range with back boiler and hot-water storage tank. Nos. 1 and 2 are simple; the cold water should be supplied through a small cistern, with ballcock ensuring that the water is kept at a proper level in the boiler, and the hot water flows by gravitation into the bath. The height is not usually sufficient to supply hot water to a tap over the sink, therefore, for use at the sink, it has to be drawn off in a vessel. The advantage of No. 2 arrangement is that the fire may be either in the range or under the copper whichever may be most convenient, while in No. 1 there is no alternative. The third system is necessary where hot water has to be supplied at levels above the range, and involves a pressure boiler and a circulating or storage tank, a considerable amount of piping and periodical attendance in cleaning out the boiler, and possible renewal both of the boiler and the adjacent pipes owing to the deposit of fur. On the ground of both initial and maintenance expense this system is to be avoided if possible, and in a general way either No. 1 or 2 will be found to reasonably comply with all requirements, and preferably No. 2, owing to possible economy of fuel

Cooking Stores.—Where gas is available, a gas cooker can be placed in the scullery and a simple register stove with an oven and perhaps a small boiler installed in the living room. This would be economical in the first instance, and tend to economy in fuel.

There is a probability that there may be a public supply of hot water within a comparatively short time produced by waste steam from concentrated electricity works, and that current will be supplied at much lower prices, including for power. This may also lead to the more general and economical use of electricity for cooking, and certainly for lighting in urban districts.

Water Supply.—Rain water collection and storage. Where there is a public supply of water, and the water does not exceed 15° of hardness, storage of rain water is not required. When there is no such supply it is desirable to store rain water, which can be best done in a barrel not exceeding 40 gallons in capacity, which can be placed on brick or concrete supports, and, if of sufficient height, can be connected with a tap over the sink. A draw-off tap towards the paved yard and a cover should be provided. Access should be easy, so that it may be cleaned out at sufficiently frequent intervals.

Working Conditions.

Disposal of Excreta, Rain and Waste Water.—(*a*) Where sewers are available—

Under skilful advice manholes and traps can be largely dispensed with.

The overflow from the rainwater butt and the rainpipes should discharge into shoes without traps.

Waste water from sinks, baths, and lavatories should discharge into gulleys under the gratings, and one gulley should, if practicable, take several wastes.

(*b*) Where isolated from sewers—

Where there is no public scavenging nor system of water supply, earth closets should be installed and the contents dug into the land.

Where there is a water supply, and arrangements can be made for emptying and cleansing cesspools, these may be installed.

Excreta from single or double cottages, or in large quantities as from groups of cottages having a plentiful supply of water, could be biologically treated, and the effluent passed into or upon the land, or into a ditch, or temporarly retained in tanks upon allotments for use in dry weather.

Waste water from sinks, baths, etc., under favourable conditions, could be passed through a rubble open filter into land drains or a ditch. Or, where this is impracticable, could be stored in a cesspool in a garden or allotment, and pumped up for use on the surface.

In districts where the conservancy system can be efficiently employed, suitable arrangements must be made for supplying dry earth, and for the collection of pails, and, where there is land available, the waste water from sinks, baths, etc., should be collected in an automatic flush tank, and discharged in quantities of not less than 10 or 20 gallons at a time into sub-irrigation drains, constructed of agricultural pipes, laid in such a manner that the gradient can be maintained. It is essential that a sufficient quantity of waste water be discharged at each flush so as to make the water travel to the far end of the drains. Without a flush tank the water merely dribbles into the first few pipes, and a nuisance is soon created.

Disposal of House Refuse.—The receptacle for temporary storage should be of galvanized iron with a

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tight-fitting lid, and should be frequently cleansed, and dusted with carbolic powder or other disinfectant. House refuse if kept is a favourite breeding place for flies. House refuse contains some materials of value, such as tins, paper, cardboard, bones, bottles, rags, etc., which should, if possible, be separated and sold. The ashes should be screened, the larger pieces used as fuel.

In localities where there is no systematised collection by the local authority the house refuse need not be stored, but some of it can be used as food for pigs and poultry, and what is of no use can be buried in the garden as manure. The paper and dry materials can be burnt or sold.

Some local authorities recommend the householder to burn all they can in the kitchen fire in order to save cost of collection, but this appears to be a mistake under present circumstances, and is sometimes difficult to accomplish, gas fires being used largely for cooking purposes, and these are not suitable for destroying refuse.

The value of house refuse for pigs, poultry, manure, etc., is now being appreciated, and developments in this direction are being effected.

The Repair of Old Houses.—In many districts, especially in manufacturing areas, there is, at the present time, scarcely a habitable house of any size which is unoccupied, and the shortage of houses is so great that under any practical housing scheme the number of houses completed in each of the three following years will only make up the shortage, and not leave a house vacant. To supply the ordinary "give and take" of people who require to move from one district to another, there ought always to be a certain percentage, say between five and ten per cent., of houses unoccupied, so that it would be five of six years before it would be safe to demolish any of the existing houses. During the whole of this time, temporary repairs must be done to old houses without entertaining the question of their condemnation.

Speaking generally, as regards the rural districts of England as a whole, every house ought to be repaired and kept in as good condition as possible during the next ten years, because it will be impossible to build, except at a high price, and materials will, for all those years, be difficult to obtain. The only house condemnations which should be considered are those where the surrounding conditions make it impossible to keep them fit for occupation.

HENRY TANNER, Chairman.

House and Town Planning Exhibition

UNDER the auspices of the Leeds Civic Society, a House and Town Planning Exhibition is being held this month at the City Art Gallery.

The Leeds Civic Society has had the co-operation of the Town Planning Institute, London, and the Garden Cities and Town Planning Association, London, with the local assistance of the following bodies:—

The City Engineers' Department, representing the Improvements and Development Committees of the Leeds City Council.

The Leeds and West Yorkshire Architectural Society.

The Leeds Women's Citizens League.

The Thoresby Society.

The City Free Library and Art Gallery Committee.

The South Yorkshire Civic Survey.

The Leeds Builders' Association.

The duties of organising secretary of the exhibition have been undertaken by William H. Thorp, F.R.I.B.A., the hon. secretary of the Leeds Civic Society.

The object of the exhibition has been to make the public acquainted with the scope of town-planning schemes, and proposals and plans for the lay-out of building land and properties acquired for this purpose.

Illustrating the town-planning schemes are local plans for the development of the Middleton and Hawksworth Wood areas, and in the neighbourhood of London and elsewhere in the provinces a great variety of maps are shown of garden cities, among others, the Hampstead and Golders Green suburbs, the Northwood Ruislip scheme, Port Sunlight, New Earswick, near York, Bournville, and other housing colonies which have sprung up during the war in connection with munition centres.

Following this department space is given up to illustrate plans and designs for workmen's cottages specially designed for present and future garden city colonies. These are exhibited by the Leeds and West Yorkshire Architectural Society, which is well represented by means of plans and exterior views submitted by the following architects: W. Carby Hall, Connon and Chorley, E. J. Dodgshun, G. F. Bowman & Son, William H. Thorp, Percy Robinson, W. Alban Jones, Kitson & Parish, W. J. Coombs, A. J. Healey, Hervey Rutherford, of York, and G. Birkinshaw.

In addition to these drawings, a most valuable collection of photographs is hung in the North Room, showing views of admirably planned and designed cottage houses charmingly grouped in country surroundings at Port Sunlight, Bournville, Hampstead, Letchworth, New Earswick, and elsewhere, such as it is hoped will be built in the new garden city suburbs in the neighbourhood of Leeds.

In contrast to these houses, on a screen in the East Room, is to be seen, contributed by the South Yorkshire Civic Survey, plans showing the evolution of the "Back to Back" artisan's house, as built in Leeds during the last seventy years.

Some models are exhibited, including a block of four cottages as built by Messrs. Rowntree & Co., at New Earswick, with a flat roof, and another of semi-detached cottages, also with a flat roof, and built of concrete contributed by Mr. Arthur Mitchell, of Leeds.

A glass case contains a charming group of cardboard models of houses made by Mr. G. J. Dodgshun, F.R.I.B.A., and another case contains a model of a couple of houses contributed by Messrs. Bassett Lowke, of Northampton.

The interior fitments of a model artisan's house have received the special attention of the Leeds Women's Citizens' League, and under the auspices and direction a full-size working scullery has been fitted up with the best and most approved modern appliances; and, in addition, various firms in the city have kindly contributed examples of the most recent types of cooking ranges and various labour-saving appliances. A model of the artisan's house has been provided by Mr. H. S. Chorley, F.R.I.B.A.

One of the most popular features of the exhibition is a large sized model of a children's playground, a copy to a small scale of a playground fitted up and presented by Mr. CharlesWickstead to the town of Kettering.

Leeds, of olden time, is shown by a series of drawings and photographs of old buildings in Leeds contributed by the Thoresby Society, and also some ancient maps of the town lent by the City Free Library Committee.

And, lastly, a few examples of building materials of modern make are shown by the Leeds Master Builders' Association.

During the course of the exhibition lectures have been given twice a week by the following:

Professor Rothenstein, of Sheffield University.

Charles Wicksteed, "Children's Playgrounds."

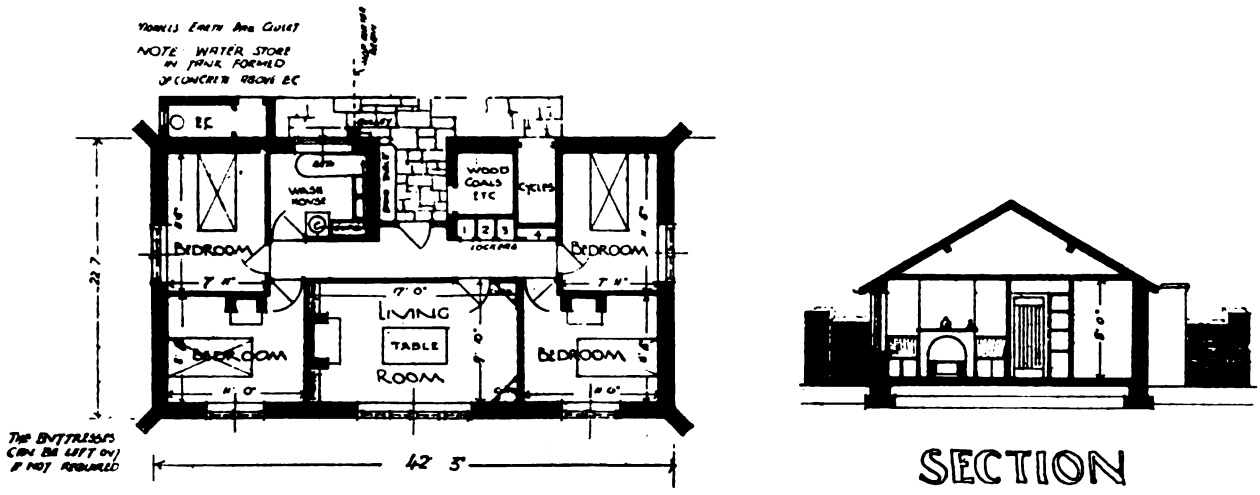
Mrs. Barton, of Sheffield, "The Workman's House from a Woman's Point of View."

Dr. Cohen, of Leeds University, "The Smoke Nuisance: its Cause and Effects."

Professor Abercrombie, of Liverpool, "Recreation Grounds and Open Spaces."

W. T. Lancashire, C.E., City Engineer, "Town Planning and Reconstruction in Leeds."

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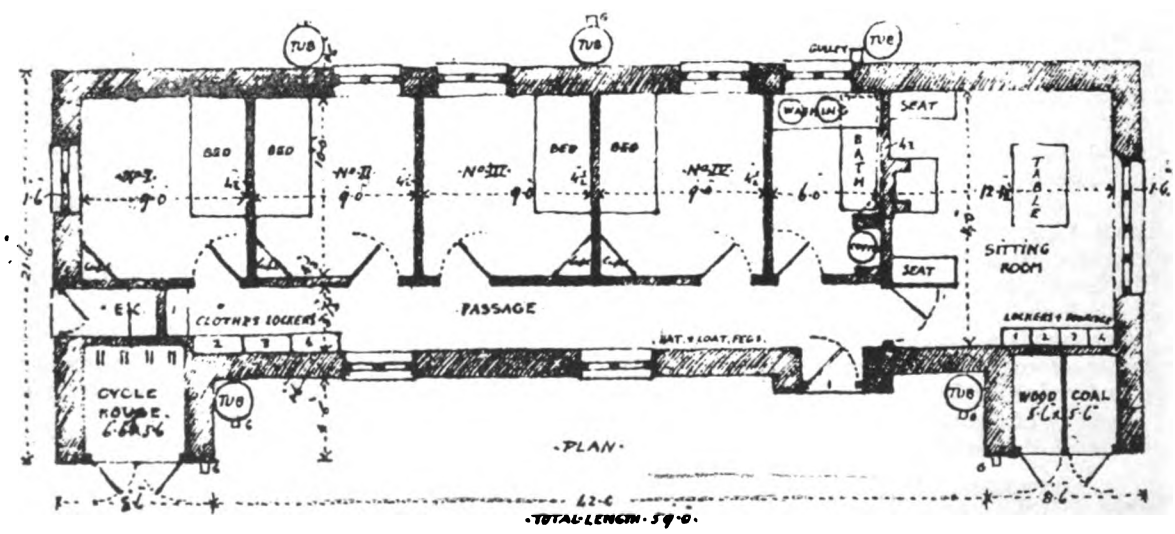
ROYAL NATIONAL EISTEDDFORD COTTAGE COMPETITION.—FIRST DESIGN.

"Living-in Quarters" for Agricultural Labourers.

No one supposes that the houses which the Local Authorities are being urged and helped to build by the Government will finally dispose of the shortage of dwelling accommodation throughout the length and breadth of the land; more particularly is it difficult for a Local Authority, working out its scheme, as most of them are, with an insufficient survey of existing conditions, both of housing accommodation and agricultural requirements, to estimate precisely how many houses are wanted in order to man sufficiently our farming industry, or the exact place where every house could most conveniently be placed. We need not be unduly troubled about this for the moment because the houses that are built in the country, provided they are individually properly designed, will certainly be useful, and very few will be placed where tenants are not likely to present themselves. The colonisation of our country-side is likely to be so extensive that it would be difficult to find a spot, apart from moors and mountains, where a house is not required.

But there are certain special aspects of the rural housing problem which can only be dealt with by private enterprise, which alone is sufficiently in intimate touch with particular rural conditions; and one of the most pressing needs is for adequate accommodation for unmarried men working on large farms. In many parts of the country it is a practice for these men to lodge in a neighbouring village, but this is not always possible, nor do many people think it desirable; the new houses especially are designed and intended to provide full accommodation for growing families, and not for letting lodgings. In other parts of the country the "living-in" system is adopted, and this has much to commend it in theory, though in practice it has led to appalling abuses. In Wales and Scotland, especially in the remoter parts, "living-in" quarters have been allowed to degenerate into using any sort of existing accommodation that is not required for produce or beasts. This is not the way to attract able and decently minded young men to farm life, and if the "living-in" or bothy system is to be perpetuated, it is essential that a decent type of building should be evolved, which, while giving personal freedom and comfort to the occupants, would at the same time not burden them with house work.

In the recent competition held at the Welsh National Eisteddfod in Neath, Lady Boston offered a prize for the best design for "living-in quarters" suitable to be built in close proximity to Welsh farm-houses, and we illustrate the first and second prize designs, by Messrs. Thomas & Morgan, and Mr. Herbert North. Such buildings should make very cheerful and comfortable quarters, and, as suggested on the block plan, they would be sufficiently detached so as not to interfere with the privacy of the farm-house or to be unduly supervised by the latter. The important question of meals would probably vary in different cases, but generally speaking the midday meal



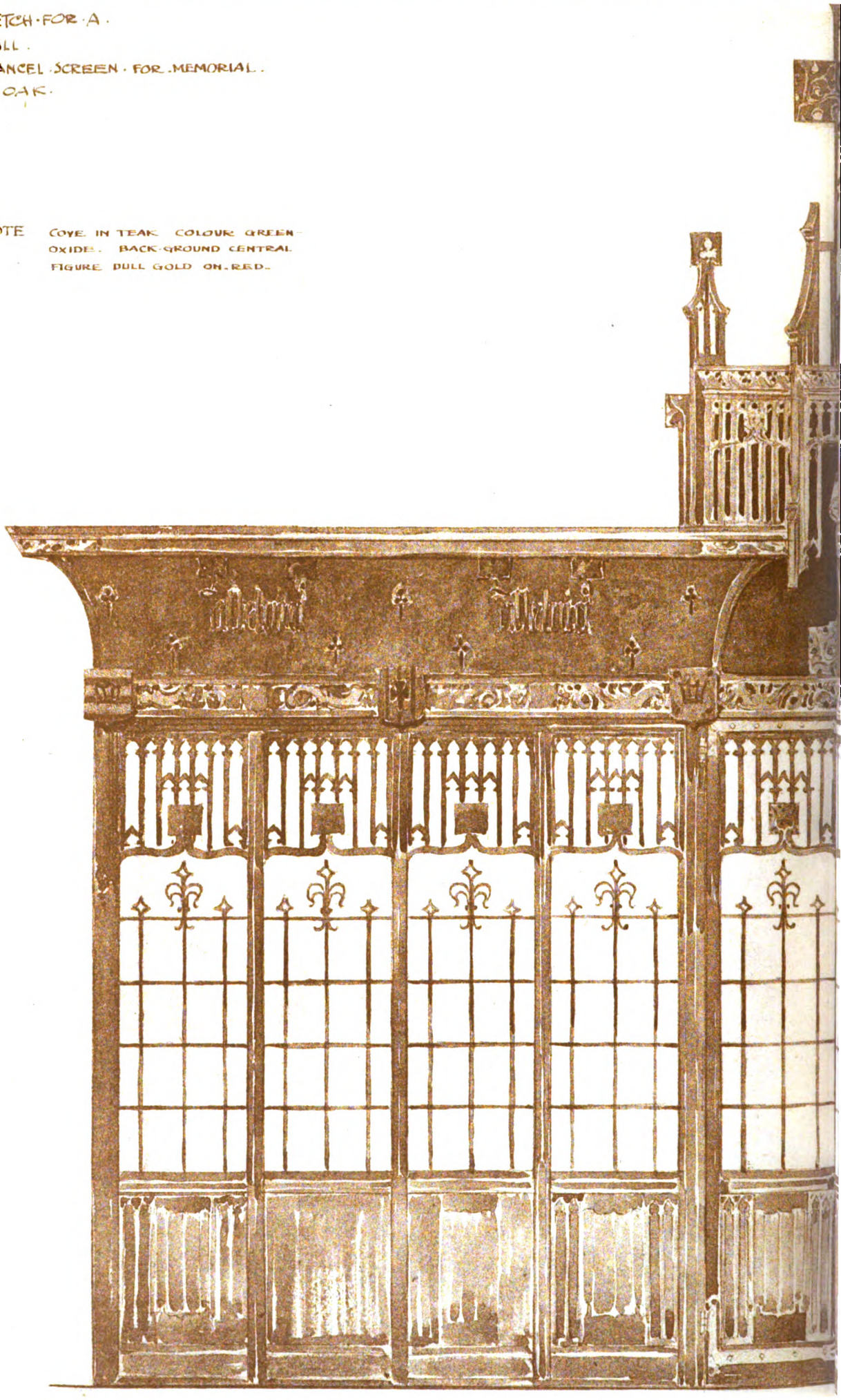
ROYAL NATIONAL EISTEDDFOD COTTAGE COMPETITION.—SECOND DESIGN.

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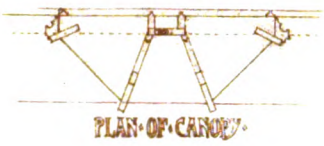
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SKETCH FOR A
SMALL
CHANCEL SCREEN FOR MEMORIAL
IN OAK

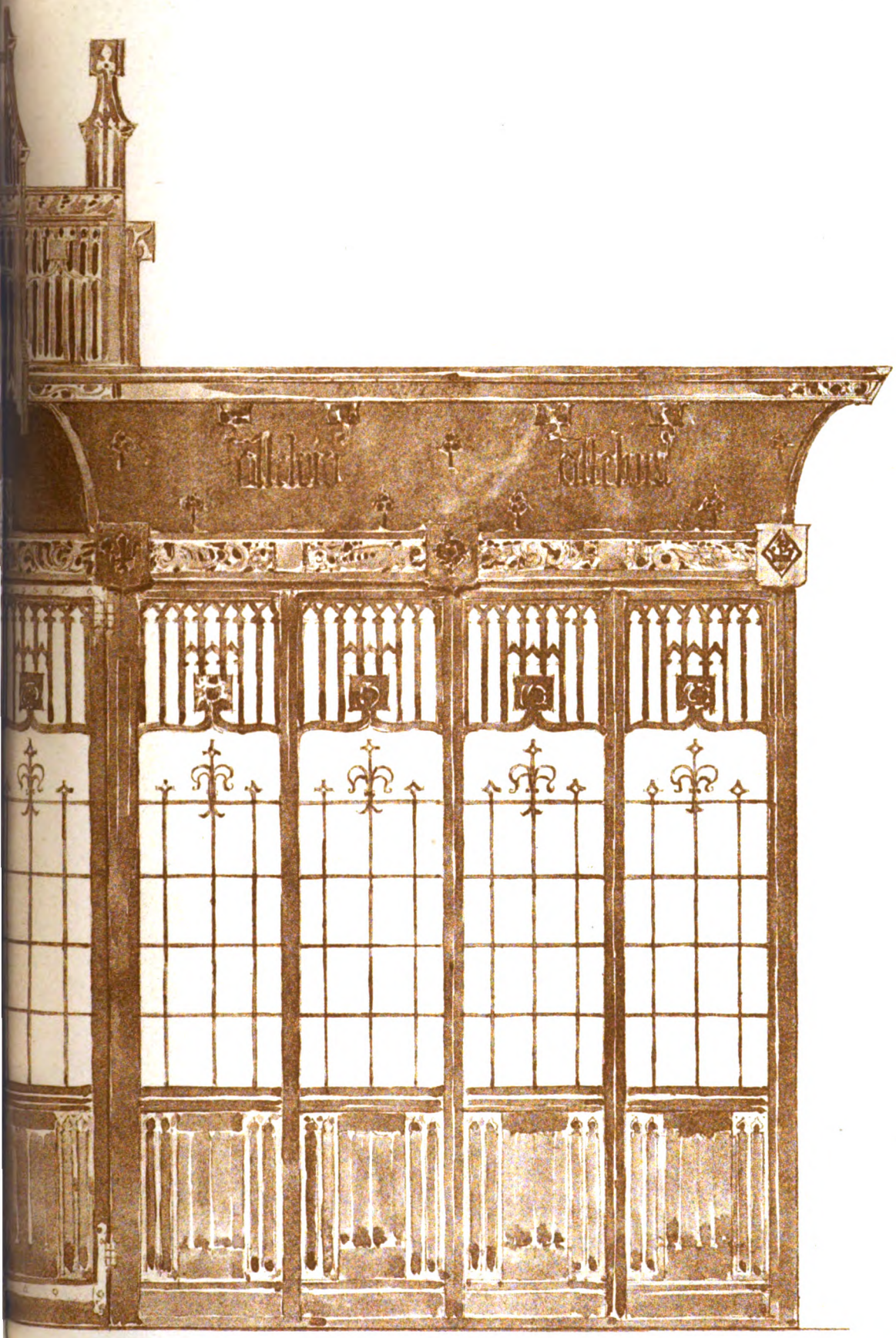
NOTE COVE IN TEAK COLOUR GREEN OXIDE. BACK GROUND CENTRAL FIGURE DULL GOLD ON RED.



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PLAN OF CANOPY

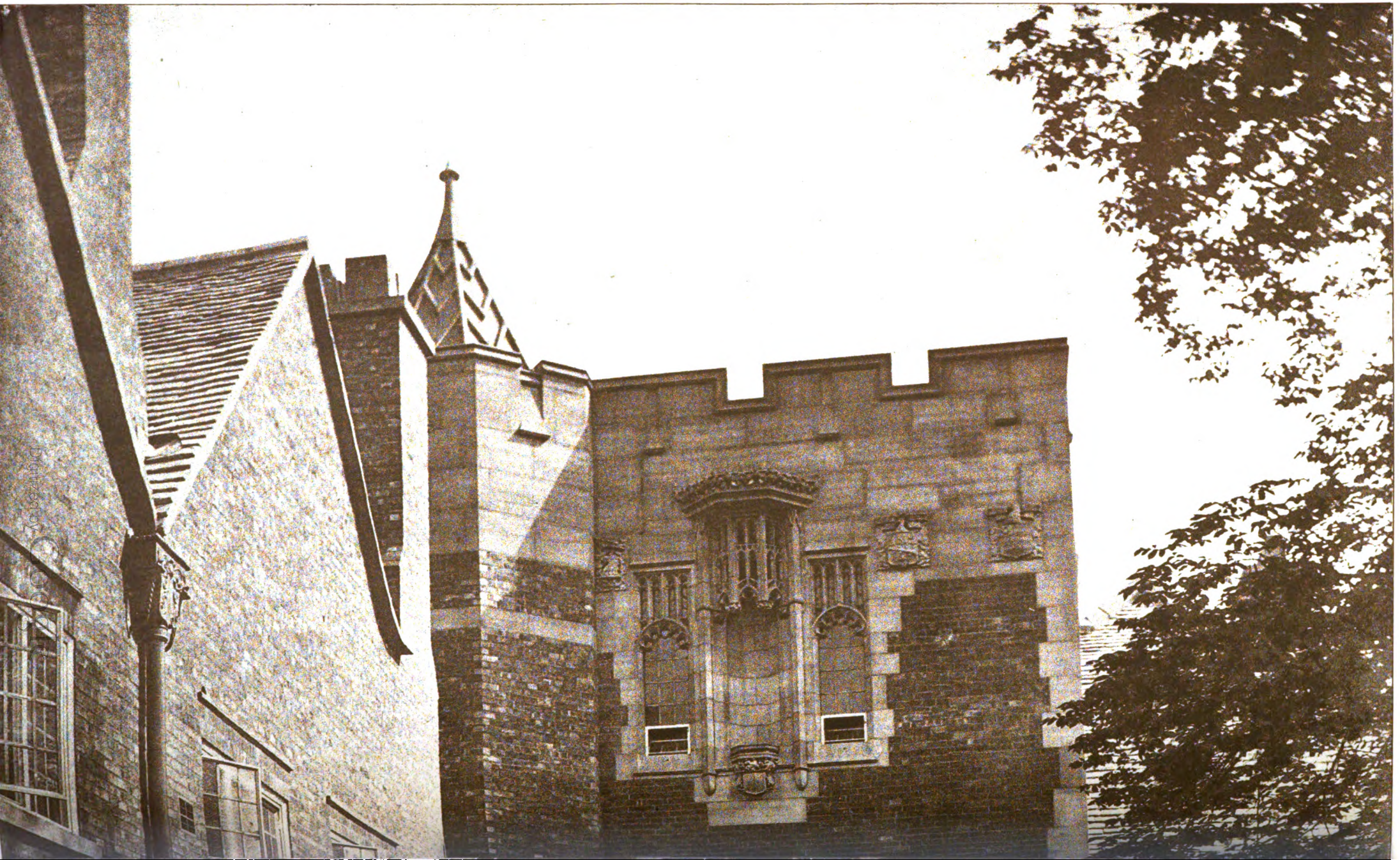


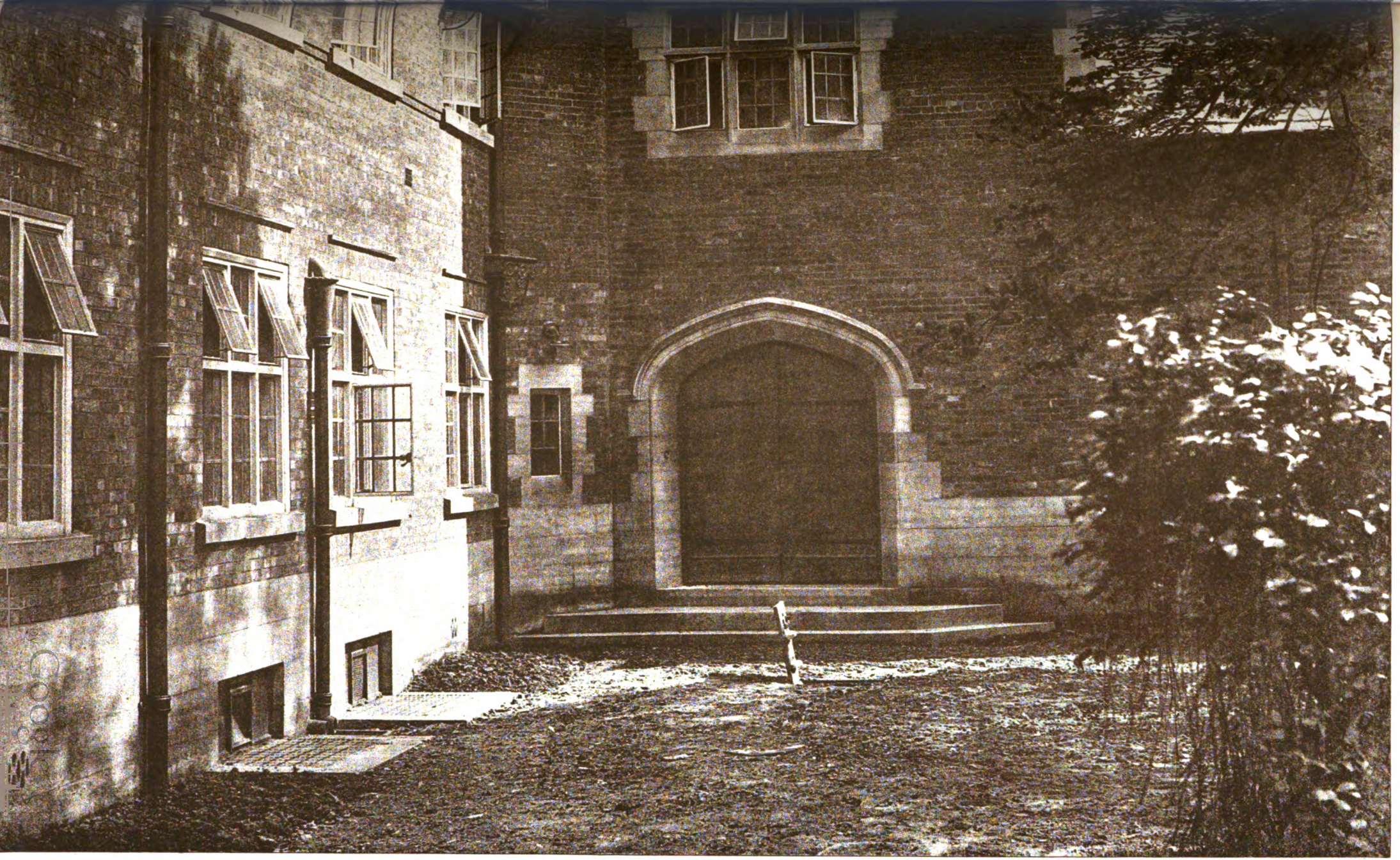
JAMES A. SWAN · F.R.I.B.A. ·
ARCHITECT.
54 NEW HALL ST. BIRMINGHAM

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HULME HALL OF RESIDENCE FOR THE UNIVERSITY OF MANCHESTER, QUAD TOWER ENTRANCE.

THOS. WORTHINGTON & SON, ARCHITECTS.

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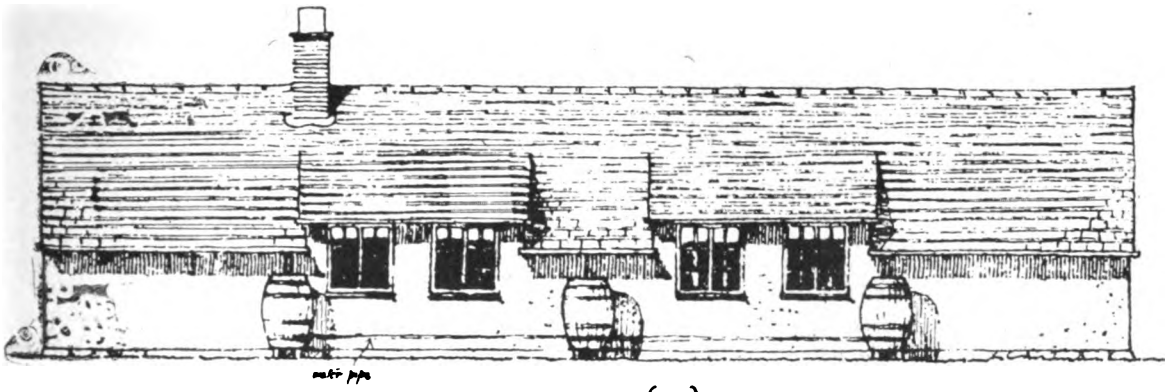
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THEATRE NANCY.

M. HORNECKER, Architect.

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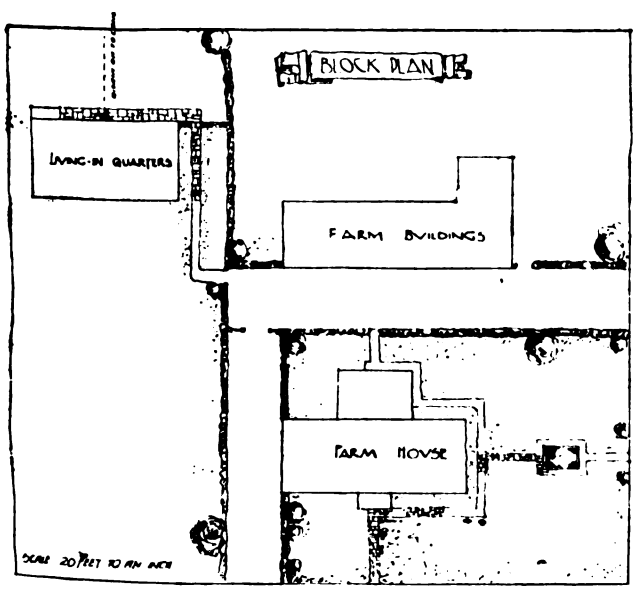
SIDE ELEVATION (S.E.)

ROYAL NATIONAL EISTEDDFOD COTTAGE COMPETITION.—LIVING-IN QUARTERS—SECOND DESIGN.

would be brought into the living room from the farm kitchen, and there kept warm for the workers when they came in. The cleaning of buildings of this sort would also be in the hands of the staff from the farm-house.

The two designs illustrate different types of plan, the compact and the long, and the Assessors were probably right in giving the preference to the former. It is a pity, however, that the author thought it necessary to captivate the eye by means of buttresses and yew hedges; but he has the sense to note that the buttresses could be left out if not required—and there could certainly be no need for these otiose features.

Here is not the place to go into the financial side of this question, but it is clear that such a building must be put up by the owner of the property. The most satisfactory way, of course, would be for the wages of the agricultural labourer to be sufficient for him to pay an economic rent based upon the cost of building and upkeep, which in turn, of course, raises the question of the value of farm produce. But if it is necessary to build these quarters before prices come down or wages go up sufficiently there should be a clear case for some form of national grant to defray this excessive cost. There could be no question of the Government presenting money to private individuals if the grant took the form of paying for the extra cost of high priced building incurred owing to the urgency of the need. A block grant would be the only satisfactory form of subsidy for this purpose. It is greatly to be hoped that some steps will be taken in this direction, and if a group of the large farm owners in the parts of the country where this system obtains would agree to build "living-in quarters" on the condition of receiving some such grant, there is no reason why these buildings should not be put up as part of the post-war housing scheme.



COTTAGE COMPETITION—BLOCK PLAN OF FIRST DESIGN.

Germany's Stolen Chemistry.

WE give quotations from a valuable and useful publication, entitled "Germany's Stolen Chemistry," by Townes R. Leigh, Professor of Chemistry at Georgetown College, printed in America, which shows us what we have lost and Germany gained in the past:—

I have before me the leading text-book of general chemistry, the one taught in the foremost universities. Glancing down its index, my eye finally rests upon the word "Law," followed by a list containing twenty-one fundamental laws by which the science of chemistry is governed. There I see the names of Avogadro, Boyle, Charles, Dalton, Dulong and Petit, Faraday, Gay-Lussac, Henry, Le Chatelier, Mendelejeff, et cetera down to van't Hoff—but nowhere do I see the name of a German. Italy, England, France, Russia, and Holland flash forth in the glory of their sons wherever the principles of chemistry go; but Germany did not discover one of these secrets of general chemistry. Liebig and Wohler, who in the nineteenth century made important contributions to the branch of synthetic chemistry, received their training from the French. Germany, therefore, talks fast and furiously about the modern chemical industry, and commence with the hope that her clamour will cause the world to forget her debts. But by the aid of Buckley's "History of Natural Sciences," we cannot forget that of the thirty chief men of science of the seventeenth century, only three were of German blood; and, of the twenty-seven of the eighteenth century, again only three were German. During the nineteenth century the science of chemistry made greater progress than it had made in all its past history. The majority of the most important contributions to chemistry during the past century were not made by Germans.

When we look over a catalogue of the chemical elements we are at once impressed with the very small number of useful ones discovered and first examined by Germans. Not a component of the air he breathes was discovered by a German. Oxygen is credited to Priestley, an Englishman, who late in life settled in Pennsylvania; nitrogen, first recognised by Rutherford, a professor in Edinburgh University; carbon dioxide, isolated by Black, a Scottish chemist and physicist; helium, krypton, xenon, and neon, discovered and first studied by British subjects, Lockyer, Ramsay, Crookes, and Rayleigh. Not an element in water was discovered by any German. Hydrogen was discovered by Cavendish, the noted English chemist; and oxygen, its other component, by Priestley, as we have already stated. Not an element in the salt with which we savour our food was discovered by any German. Its chlorine is a gift of that productive investigator, Scheele, a Swede; its sodium, from the versatile Davy of London. The indictment which has been brought against German chemists concerning the elements in air, water, and salt may be extended to cover the elements found in seventy-five thousand other substances, including nearly all of the synthetic compounds used in the world's trade, to which we now wish to turn our attention.

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There is probably no other field in which synthetic chemistry has played so important a role as in the coal-tar industry. A brief review of some of the salient points in its development, including the synthesis of the first coal-tar colour, proves conclusively that Great Britain is the original home of the coal-tar dye.

In 1739, Dr. Clayton, Dean of Kildare, first distilled coal and obtained coke, tar, and gas. Less than fifty years later the Earl of Dundonald, a Scottish nobleman, obtained a patent for the extraction of coal-tar in commercial quantities. In 1792 William Murdock, of England, first used coal-gas as an illuminant. Naphthalene, used chiefly in the manufacture of indigo, was discovered in 1820 by Garden; benzol, the parent substance of the most important dyes, was discovered in illuminating gas in 1815 by Faraday; anthracene, largely used in the synthesis of Turkey-red, was first procured by Dumas, of France; toluene, used both for making dyes and the powerful explosive, T.N.T., was first obtained by Mansfield; and picric acid, also employed in the manufacture of dyes and explosives, was first prepared by Peter Woulfe, a London chemist.

In connection with these achievements, the importance of the miner's safety-lamp, invented in 1815 by Sir Humphry Davy, must not be overlooked, for by the use of that simple and ingenious device the danger and hazard of mining coal were largely removed.

The great honour of producing the first coal-tar colour belongs to W. H. Perkin, an English chemist, who, during the Easter vacation of 1856, tried out some experiments in which he was intensely interested. He planned to produce synthetically no less a substance than the valuable alkaloid, quinine. The attempt was a failure in so far as obtaining quinine was concerned, but he noticed that a coloured product had been formed. The most interesting feature of his work was the quick perception he had of some possible value of the new substance. The dye was finally purified and given the name mauve, by which it became familiar. For fifty years it was used in printing the English penny postage stamp, by which means England maintained an unique memorial to her celebrated chemist, perpetuated even in the remotest part of the world, wherever her mail service may have penetrated.

Not long after his first great discovery, Perkin perfected a method of manufacturing alizarin, with the result that the extraction of that dye from madder has been practically abandoned; and the enormous acreage formerly devoted to the cultivation of that plant has been given over to cereals and other crops. Thus the laboratory for the first time in history became a successful competitor with the land.

After the synthesis of mauveine by Perkin, the synthetic dye industry grew by leaps and bounds. Frequently methods for the preparation of the same dye were discovered independently by different chemists, and a common dye was often sold under different names. For example, Verquin, a French chemist, manufactured fuchsine, and this same dye became known as magenta and rosaniline.

In 1863 an Englishman by the name of Lightfoot produced aniline black, and in 1873 the first sulphur dye was discovered by Croissant and Brittoniere, of France. In connection with the development of dyestuffs it should be recorded that to a French chemist is due the modern method of the preparation of the excellent bright yellow dye for animal fibres. Another quality which this dye possesses is that it may be used for the detection of hemp, flax, and cotton in woollen goods, inasmuch as it does not colour vegetable fibres.

Few of the valuable chemical processes were developed by German brains. The Leblanc method of making soda-ash directly from salt was devised by a Frenchman in behalf of his country and named in his honour. The Solvay method, now more generally used, was perfected by a Belgian and bears his name. Soda-ash is employed in the manufacture of glass, soap, and many chemical reagents, and the enormous quantity of 2,250,000 tons is produced annually.

The soda process for making paper from wood pulp was patented by Watt and Burgess, of America. The sulphite process for the production of paper pulp from wood and the method of decomposition of fats by steam at high temperature, largely used in the manufacture of soap, were the work of another American, R. A. Tilghman. The cyanide process of obtaining gold and silver was conceived by our fellow country men, McArthur and Forest. The process of obtaining aluminium cheap was devised by C. M. Hall, also an American, while Cowles, of Cleveland, produced aluminium bronze. The process of making carborundum and graphite in commercial quantities was the work of E. G. Acheson. The French and the Americans were the first to manufacture ice by the use of liquid ammonia.

The process of the softening of water was worked out by Dr. Clark, of Aberdeen, Scotland. The filtration of the water for public use was first carried out by Mr. James Simpson, of Chelsea Water Works, London, England. The decolorising power of vegetable charcoal was first noticed by Lowitz, of St. Petersburg, and that of animal charcoal, the basis of the modern refinery, by Figuier, of Montpelier, France. The process of hardening fats by the use of hydrogen we owe chiefly to an English firm, Messrs. Crossfield & Son. By their process whale-oil is now converted by large amounts into solid material suitable for the manufacturing of soap. The important contact process which is largely used in the manufacture of sulphuric acid has been developed upon the observation made as far back as 1831 by P. Phillips, a vinegar merchant of Bristol, that the oxidation of sulphur dioxide is greatly accelerated by the presence of platinum. The Englishman, John Mercer, taught us to mercerise cotton. The Frenchman, Chardonet, the process of making artificial silk. The method, however, by which most of the imitation or artificial silk is made at the present time is the viscose process invented by the English chemists, Crass and Bevan, in which wood pulp is used. H. Mege, of France, gave us oleomargarine; malted and condensed milks are distinctively American born and developed products. Hyatt, of America, gave to the world celluloid.

To M. Verneuil, of Paris, we are indebted for the artificial ruby, the real ruby of science, which is as much the ruby of Ceylon and Burmah as is the water formed by burning hydrogen the water of the rain—identical in property and composition. In a small factory in the Rue Lafayette is to be found the commercial production of rubies on so cheap a scale as to decree the doom of the ruby-mine, a doom as certain as that decreed by the synthetic dye to the indigo industry of India. To Henri Moissan, of the Sorbonne, who produced tiny artificial diamonds, belongs the honour of the art and practice of electro-metallurgy, for while other men have done things before and after his work, he made three hundred contributions of new substances in the electro-metallurgical field. In the ever-widening circle of factories that surround Niagara Falls are to be found the greatest high temperature industries in the world.

Architectural Association Atelier.

The Architectural Association Atelier, for advanced students and members of the architectural profession generally, which was closed in 1914 owing to the outbreak of war, will re-open on January 6, 1919, at the Architectural Association, 35 Bedford Square, where special accommodation has been arranged. It is hoped that the Atelier, at the present time, will be of special value to those who during their service with the colours have lost touch with problems of architectural design.

For full particulars of programme, etc., apply Secretary, The Architectural Association, 35 Bedford Square, W.C. 1.

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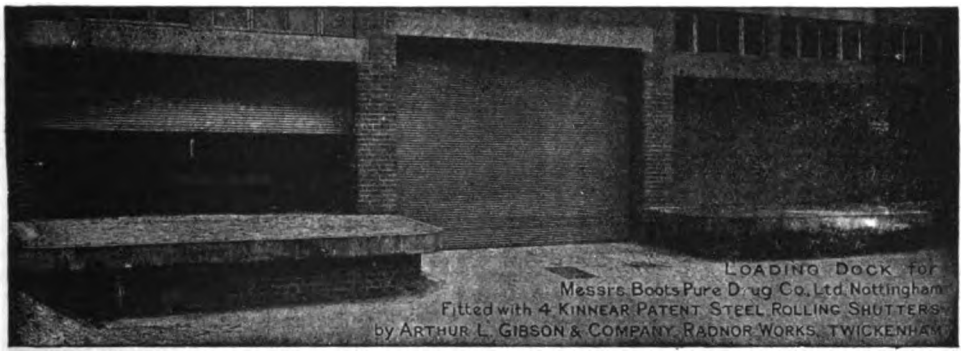
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British Patent Specification.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 118,974 (January 29, 1918).—Fittings for use in Glazing Roof and like Structures. William Coackley, plumbing and building contractor, of 8 Broad Street, Pendleton, Manchester.—This invention has for its object to provide new or improved fittings for economising labour in glazing roof and like structures, the fittings enabling the T astragals to be secured in position in the condition in which they are delivered from the rolling-mills, and without the necessity for any drilling, countersinking, or forging. Fig. 1 is an elevation showing upper, lower and intermediate types of the improved fittings supporting astragals. Fig. 2 is a plain view of the parts shown in fig. 1. Fig. 3 is an end elevation of the lower fitting looking from left to right of fig. 1. Fig. 4 is an end view of the intermediate fitting looking from left to right of fig. 1. Fig. 5 is an end view of the upper fitting looking from right to left of fig. 1. Fig. 6 is a plan view of the intermediate fitting with the upright member thereon detached and laid on its side. Fig. 7 is a detail view. The invention, whether employed at the ends of a roof or in intermediate positions where one length of glazing overlaps another, comprises an arm or like part a which may have a countersunk slot b therein, to receive the head of a bolt or screw by which the fitting is secured upon an angle iron as c, or purlin, scantling, or other part of the roof. The arm supports the end of a T astragal d, and has lug-like projections e at opposite sides to prevent lateral displacement of the T which rests thereon. There is also upon the arm an upwardly projecting turned over or hook-like part f under which the end of the T astragal passes so that the latter cannot be lifted from the fitting but must be slid longitudinally. The upper fitting is that shown to the right of fig. 1. In the case of the intermediate fitting, the part f is turned over in opposite directions to take over the ends of the two lengths of T astragal thereon. The intermediate type of fitting has, in addition, a forked or slotted projecting part g (see fig. 6) which serves to embrace the stem of the T astragal, adjacent the one which is supported upon the arm portion of the fitting. The second T is supported by the angle iron c (see fig. 1) to which the fitting is secured. To prevent the upper length a^1 of the overlapping glazing (a^2 indicates the lower length) from slipping or downward displacement, a slot f^1 is provided in the upwardly projecting part f which received the centre or pivot portion of a U shaped part h having downwardly projecting ends upon the extremities of the U which engage the lower ends of the glazing and hold it in place (see fig. 1). When the upper T astragal is in position, the centre or pivot portion of the U is held in its slot by the end of the T which abuts against the part f. The glazing may be held down upon the tees by metal plate clips d^1 embracing the base of the latter and turned over the edges of the glass as shown in fig. 7. Each improved fitting has a turned down portion k for engaging the angle iron c upon which it is supported, and in the case of the intermediate and lower fittings, for taking the weight, which tends to displace the glazing downwards, off the studs or bolts holding the fittings upon their supports.—September 28, 1918.

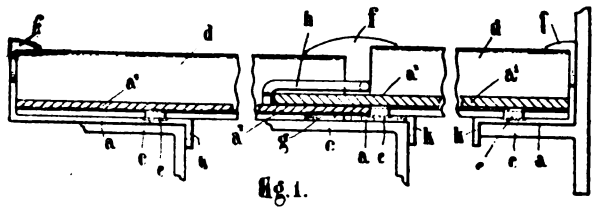


Fig. 1.

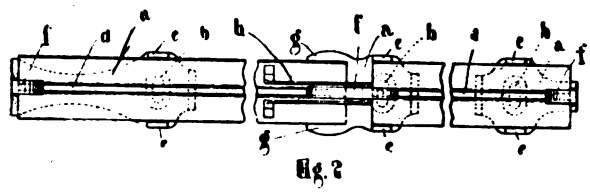


Fig. 2

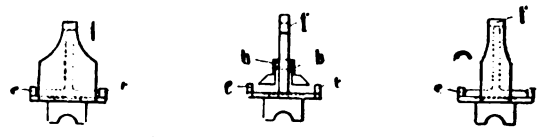


Fig. 3 Fig. 4 Fig. 5

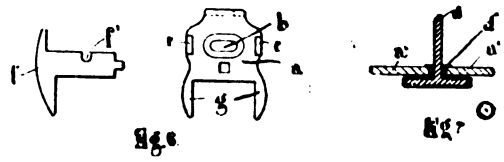


Fig. 6 Fig. 7

General.

Kenilworth Council will be prepared to submit their housing scheme next March. The intention is to build about one hundred houses. Arrangements are in progress with allotment holders on this site to have the land cleared for next March.

In anticipation of the erection in Scotland of a large number of war memorials, the Royal Scottish Academy considers it to be their duty as a national institution to make their special knowledge of the fine arts available to the public by offering to advise and guide public and private committees charged with carrying out works of the kind referred to. It is believed that at the present time necessity has arisen for the creation of a reliable advisory authority to which questions of taste and fitness in regard to war memorials may be referred. In order that the contemplated advisory committee may be broadly based the Academy proposes to invite the co-operation on a general committee of representatives from public bodies throughout Scotland and of some influential private persons; and that an administrative committee, to be constituted from the general committee, should be prepared to consider and report on the propriety and artistic merit of designs submitted to it, and also to advise in regard to questions of site and general appropriateness. Communications should be addressed to the "War Memorials Committee," The Royal Scottish Academy, Edinburgh."

The Executive Council of An Comunn Gaidhealach (the Highland Association), which met at Stirling recently under the chairmanship of Mr. Malcolm Macleod, Govan, the president, discussed some interesting questions. The matter of adopting appropriate designs in connection with any future building schemes in the Highlands came up on the report of the Arts and Industries Committee, by whom it had been very carefully considered. Mr. Colin Sinclair, M.A., architect, Glasgow, stated that there was a possibility of houses being erected throughout the Highlands by the Board of Agriculture, and he argued that it was desirable that in design such houses should harmonise with the topography and the architectural traditions of the country. As an example of architecture that was egregiously out of place with its surroundings, he cited the case of Connel Ferry, "where a bit of Pollokshields had been dropped down by the side of Loch Etive," and the Swiss chalet houses at Colintraive. It was rumoured that Lord Leverhulme intended to erect about 200 house in Lewis, and Mr. Sinclair thought the Comunn should make representations to his Lordship with regard to their style and general features. The meeting decided that a pamphlet on the subject should be printed and issued to all the proprietors and County Councils in the Highlands for their guidance in forming housing schemes, and it was remitted to Mr. Sinclair and Miss Campbell of Succoth to prepare this pamphlet. In view of the place that Gaelic has secured in the new Education Act it was decided to prepare and publish a full set of Gaelic readers for use in Highland schools. After some discussion the Council agreed that the annual Mod, which has been suspended during the war, should be revived, and that an endeavour should be made to hold it in connection with the annual Congress of the Pan-Celtic Union.

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THE
Architect and Contract Reporter.
FRIDAY, JULY 5, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

CONTRACTS OPEN.

ABERDARE.—July 10.—For repairing and painting, &c., the Commercial Hotel, Aberdare, for the Rhondda Valley Brewery Co. Messrs. Evans & Evans, Court Chambers, The Arcade, Pontypridd. Tenders to Mr. T. F. T. Jarvis, secretary, Rhondda Valley Brewery Co., Pontypridd.

ENNISKILLEN.—July 9.—For alterations at workhouse fever hospital. Specifications by Mr. James Donnelly, architect. Mr. R. Wilson, clerk, Workhouse, Enniskillen. All old material will remain property of the Guardians.

LONDON.—July 10.—For external painting work at the Park Fever Hospital, Hither Green, Lewisham, S.E. 13, for the Metropolitan Asylums Board. Mr. D. Mann, Office of the Board, Embankment, E.C. 4. Deposit £1.

ORMSKIRK.—July 11.—For painting at Poor-law institution at Ormskirk for the Guardians. Specification to be seen at institution. Tenders to clerk, Mr. A. Dickinson.

RISHWORTH, YORKS.—July 18.—For construction of reinforced concrete gauge basins and small concrete dam, also laying 200 lineal yards of 18-in. cast-iron pipes in township of Rishworth for Wakefield Corporation. Mr. C. C. Smith, M.I.C.E., waterworks engineer, Town Hall, Wakefield. Deposit £1 1s. Tenders to Town Clerk, Town Hall, Wakefield.

SUNDERLAND.—July 10.—For outside painting of technical college, Garden Street School, Colliery School, and boys', infants', and juniors' department of Thomas Street school for the Corporation. Specifications at the borough surveyor's office, Town Hall. Tenders to Chairman of Education Works Sub-Committee, Town Clerk's office. Town Hall.

A FIRE at the South Wales School of Medicine, now in course of erection, has caused damage estimated at £7,000.

BOSTON House, Brentwood, a fine example of an early manor house granted by Queen Elizabeth to the Earl of Leicester, will shortly be in the market; it contains a very fine panelled ceiling of the year 1602.

THE Local Government Board have sanctioned the loan of £11,150 for the purchase of land situated between Mill Lane and Love Lane, Poulton, for the erection of working-class houses under the scheme of the Wallasey Corporation, subject to withdrawal of the Treasury restriction.

ON Saturday afternoon a large party of members and friends visited Rosslyn Chapel and Castle. At the chapel Mr. John Watson, F.R.I.B.A., acted as leader. At the castle Dr. Ross conducted the party over the buildings. Attention was drawn by some of the architects present to several parts of this building where the masonry is much decayed and cracked, one or two portions in particular being in a dangerous condition. The hope was expressed that the necessary repairs may be undertaken in time to arrest further decay.

TENDERS.

CORK.

For laying sewer at Skahabeg for the Cork District Council.
DANIEL COLLINS, Friars' Walk, Cork (*accepted*) £2,189 0 0

DUBLIN.

For a waterbound macadam extension of Alexandra Road in connection with the new shipyard for the Port and Docks Board.
COLLEN BROS. (*accepted*) . . . £5,051 0 0

NEWCASTLE-ON-TYNE.

For erection of military orthopædic hospital near the Royal Infirmary.
S. EASTEN, LTD., Newcastle (*accepted*).

WEST HAM.

For cleansing and painting schools, for the West Ham Education Committee.

New City Road, Exterior.
H. C. HORSWILL (*accepted*) . . . £349 0 0
South Hallsville, Exterior.
J. BARKER & Co. (*accepted*) . . . 189 0 0
Three Mills, Exterior.
A E. SYMES (*accepted*) 346 0 0
Silvertown, Exterior.
H. C. HORSWILL (*accepted*) . . . 289 0 0
Stock Street, Exterior.
H. C. HORSWILL (*accepted*) . . . 342 0 0
Frederick Road Temporary, Exterior and Roofs of Playsheds.
CHAPMAN & STURTON (*accepted*) . . 134 0 0
St. Paul's Infants', Interior.
E. LOVELY (*accepted*) 105 0 0
Water Lane, Iron Staircase, Roofs of Playsheds.
H. C. HORSWILL (*accepted*) . . . 102 0 0

MISS H. R. GREY, of Church Hill House, Wednesbury, leaves £3,000 to the Vicar and churchwardens of St. James' Church, Wednesbury, for the erection and furnishing of a memorial chapel to be erected within three years and to be called the Chapel of the Holy Angels, in memory of her father and mother. A sum of £500 to the Vicar and churchwardens of St. James' Church, West Bromwich, for a memorial window to her father and mother.

AT last Tuesday's meeting of the Lincoln City Council, Alderman White, chairman of the Electricity Committee, reported on an interview with the directors of the Electric Power Supply, Sir John Snell, and the Local Government Board with reference to the proposed purchase by the Corporation of the power station of Messrs. Clayton & Shuttleworth. The Electricity Committee recommended the Council to ask Sir John Snell to carry out the proposed scheme of extension of the power station, and to state his terms for doing so. Alderman White explained in detail what induced his committee to make the recommendation, and said the proposed scheme would involve a total expenditure of about £240,000. The Government insisted on the abolition of small power stations, and on the establishment of large centres in order to increase the manufacture of munitions of war. The Council in committee decided to adopt the Electricity Committee's recommendation, and Councillor Ashley then moved as an amendment that the Council should not entertain the proposal. Councillor Auckland seconded the amendment, which was lost by 14 votes to 5, and the decision of the Council in committee was adopted.

MR. LORDEN, builder and contractor, was recently sued by the Electric Pavilion (Marble Arch) Co., Ltd. Mr. Justice Astbury granted relief in regard to a building agreement over a site at the Marble Arch. Mr. Justice Astbury said that since giving a preliminary judgment in March considerable correspondence had taken place between the parties concerned and the Duke of Westminster's agents, but terms had not been arranged. He was asked on behalf of the defendant to grant him relief by suspending his payment of rent on condition that it should not be liable to be recouped. He thought it would be fair to grant him relief under the Courts Emergency Powers Act to the extent of £1,600 per annum. He would be left by that liable to pay to the plaintiffs £500 a year.

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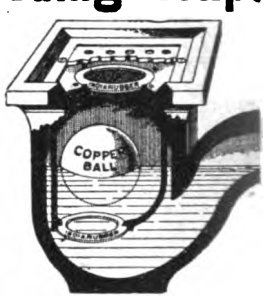
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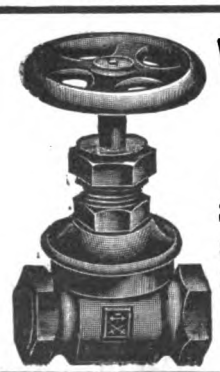
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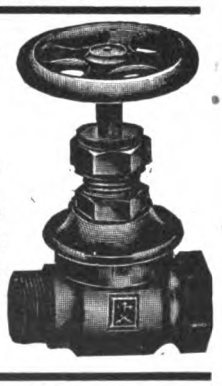
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BUILDING AFTER THE WAR.

THE Committee of the Ministry of Reconstruction which is making an inquiry throughout the country from local authorities, architects, builders, and others as to the probable demand for and supply of building materials during the reconstruction period, two years after the war, has extended until July 1, 1918, the date upon which the inquiry forms already sent out are to be returned.

The committee hopes that any authority, person, or firm contemplating building works immediately after the war who has not received one of the committee's forms of inquiry will apply either directly or through an architect to the Secretary of the Building Materials Supply Committee, 6A Dean's Yard, Westminster, for a form.

In cases where only sketch plans have been prepared and the preparation of complete plans and bills of quantities has been postponed until after the cessation of hostilities, it would appear that no materials will be required until at least six months after the war, and as regards these works it will suffice if the under-mentioned particulars are furnished:—County, description of building, estimated pre-war value of the work, estimated date of commencement of building, estimated duration of contract.

Wherever possible, however, approximate quantities of materials needed should be furnished, especially in the case of building-stone and bricks, steel and timber.

Materials needed for repairs, maintenance, &c., form the subject of a special inquiry, and particulars of these are not needed at present. In other matters, however, it is hoped that every effort will be made to complete forms of inquiry by the date specified. Unless the committee is made fully aware of the prospective needs of consumers, it will not be possible to estimate how far the available supplies will meet the demand, and its efforts to secure co-ordination may thus prove unsuccessful.

NATIONAL HEALTH INSURANCE.

IMPORTANT TO EMPLOYERS OF LABOUR.

THE Insurance Commissioners (England) desire to bring to the notice of employers of labour certain important changes as regards the payment of contributions resulting from the National Health Insurance Act, 1918, which came into operation on Monday, July 1.

(1).—*Cases of Low Wage Earners.*

The employer has in future to pay the whole weekly contribution (7*d.* for a man, 6*d.* for a woman), including the State contribution of 1*d.* in cases to which it applies. He can only deduct the same amount from the worker's wages as hitherto, but he can recover the State contributions (where payable) by making application to the Commissioners on the prescribed form before the end of the half-year following that in which the contributions are payable.

(2).—*Section 47 of the Act of 1911.*

The section under which an employer could pay contributions at a reduced rate in consideration of his undertaking to pay wages during certain periods of sickness is repealed. The employer is required in future to pay contributions at the full rate, and he has the right to make the ordinary deduction from wages, irrespective of any obligation he may be under to continue payment of wages during sickness.

Accordingly, as from July 1, 1918, employers of insured persons in Great Britain will in all cases pay contributions at the rates of 7*d.* a week for a man and 6*d.* a week for a woman. For an exempt person—*i.e.*, a man or woman holding a current certificate of exemption issued by the Commissioners—the employer pays 3*d.* a week. No deduction may be made from the wages of an exempt person; the amounts that may be deducted from the wages of insured persons are shown on the contribution cards.

Further information regarding the duties of employers under the new Act is contained in a revised edition of Pamphlet A, which can be obtained free of charge from the Commissioners, National Health Insurance Commission (England), Buckingham Gate, London, S.W. 1.

PROFESSIONAL CLASSES WAR RELIEF COUNCIL.

THE Lord Mayor presided at the annual meeting of the Professional Classes War Relief Council which was held at the Mansion House on Wednesday afternoon, July 3. His Lordship pointed out in the course of his remarks that the professional classes have been hit very hard in this war. Major Leonard Darwin gave a résumé of the work done by this excellent society in educating children, training the daughters of professional men for careers open to women, and other help given. Dr. Mary Scharlieb, chairman of the Maternity Assistance Committee, said there were 450 infants born in the home of the society, and she asked the help of the Press in making known the importance of this branch of the work where so many women were left widows. Other speakers included Lord Phillimore, Sir Hubert Parry, Mr. Cholmeley, and Mr. Woodington. It was announced that £10,000 had been sent from America, and £17,000 had been contributed from the Red Cross and St. John's Ambulance Fund.

A NEW flax mill is to be erected at Selby in Yorkshire.

THE Earls Barton Council have passed the plans for alterations to Messrs. Wren's factory.

THE surveyor to the Newark Town Council has been instructed to map out a housing scheme for the proposed sites in the Queen's and Hawton Roads.

A RESIDENCE in Cornish Road, Flint, has been presented by Messrs. Courtaulds, Ltd., artificial silk manufacturers, Coventry, for a cottage hospital for the town.

THE Peninsular and Oriental Steam Navigation Company have sold their freehold, Nos. 17 Northumberland Avenue and 22 Craven Street, through Messrs. Trollope.

PLANS have been passed by the Oban Dean of Guild Court for a new rest for sailors and soldiers. The building is to be erected immediately.

MEMBERS of the Restoration Committee have met to reconsider the question of the restoration of St. John's Church, Perth.

MESSRS. HENRY DUKE & SON, auctioneers and surveyors, of Dorchester, have sold the Pelsdon Manor estate comprising some 670 acres with the historical Tudor house, now a farmhouse.

A LOCAL Government Board inquiry has been held at South Shields with respect to the application of the Town Council for sanction to borrow £18,400 for the purchase of Cleadon Park estate, on which the Council propose to carry out a housing scheme.

AT the last meeting of the Rawmarsh Urban District Council it was stated that it had been decided to raise funds to erect a public memorial hall and institute to be named the Parkgate and Rawmarsh War Memorial Institute. It is expected that the building will involve an expenditure of about £10,000.

MR. FRANCIS WARD, builder, of Trafalgar Road, Camberwell, has been fined 10*s.* and 10*s.* costs for failing to serve a building notice on the district surveyor two clear days before commencement in writing. Defendant contended he had complied with the Act by calling at the district surveyor's office during office hours to give notice, but Mr. E. A. Young, the district surveyor, was not there. The magistrate, in deciding against defendant, reminded him that the notice could have been sent by registered post.

SHERIFF MOFFAT has given his decision at Linlithgow in an action at the instance of Mr. William Constable, architect and surveyor, Edinburgh, against the School Board of the parish of Uphall for £26 12*s.*, being fees for measurements and schedules prepared in connection with a proposed addition to the public school at Uphall in 1915. The Education Department refused to allow the building to proceed in consequence of the war, and defenders declined payment of fees on the ground that pursuer had arranged to accept payment out of the first instalment which the contractors received. The Sheriff has granted decree for the sum sued for, with expenses.

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VARIETIES.

ALTERATIONS are to be carried out to adapt the premises 308 Mare Street, Hackney, at a cost of £205 as offices for the Borough Council.

THE Borough Council of Lambeth are asked by the Food Control Committee to incur an expense of £610 to fit up a kitchen in Upper Kennington Lane, S.E.

THE Lowestoft Town Council have applied to the Local Government Board for sanction to a loan of £5,275 for sea-defence works.

IT is proposed to erect a new hostel at Castlemartyr, co. Cork, for the accommodation of disabled soldiers training for the tool-handle industry which is being started by Messrs. Eustace & Co.

THE Holywood (co. Down) Council is applying to the Local Government Board for a loan and permission to proceed with the construction of a new reservoir at the water-works.

THE Cork Harbour Commissioners are considering a proposal to reclaim about 158 acres of the foreshore with a view to the erection of warehouse and quay accommodation on the northern side of the Lee.

THE Treasury have informed the Glasgow Corporation that they are prepared to authorise the raising of a loan of £125,000 for the extension of Knightswood Hospital.

THE Elgin Town Council, at their monthly meeting, confirmed the action of their Health Committee to take no action in consideration of the erection of houses for the working classes. An estimate was submitted by the burgh surveyor showing that houses of three rooms each would cost £260 each, and could not be let under £13, and that if thirty houses were built there would be a considerable deficit.

THE Streets and Building Committee of the York Corporation have approved the following plans:—Messrs. De Burgh Bros., two temporary sheds 27 and 29 Chestnut Avenue; Messrs. Hill Bros., cycle house; Messrs. T. Cooke & Sons, Ltd., drying store; Brass Polishing Co., temporary shed.

A SPECIAL appeal is being made for funds by the Lord Mayor of Newcastle-on-Tyne for the Military Orthopædic Institution; £50,000 is needed at once, and as the work progresses and the hospital is extended the outlay will probably reach the sum of £150,000. At the present time the work is being carried on in temporary premises.

AT the Edinburgh Military Hospital at Bangour an important addition to the orthopædic installation for the treatment of shell-shock and wounded soldiers has been handed over by the Edinburgh Red Cross Committee. In the new building, which cost £6,000 to erect and equip, are various baths, including tonic or stimulating baths, sedative baths, and special or medicated baths, which make Bangour one of the most complete centres in the country.

A SITE has been chosen near Southampton for a military hospital for the American Red Cross. The central corridor of the new hospital will be 1,000 feet long opening on either side into the wards, which will accommodate from 60 to 100 patients. The site is one of the most beautiful in the south of England, and consists of 186 acres, and has a frontage of half a mile on Southampton Water. The construction of the hospital is under the general supervision of Captain F. Harper Sibley, of the Red Cross, formerly president of the Chamber of Commerce, Rochester, New York.

WE have received from Messrs. S. W. Francis & Co., Ltd., of Gray's Inn Road, London, W.C., an illustrated folder in place of their annual catalogue. It is surprising the amount of information which can be given in a small compass, and in this small leaflet Messrs. Francis show the many ways in which their rolling shutters may be used for the army, air services, garages, shops, munition works, &c. Messrs. Francis & Co. are also large manufacturers of shop fronts in brass, gun, or white metal, gilt and wood letters, and spring and roller blinds, &c., and for which for over sixty years they have had a high reputation.

THE Hull Corporation Works Committee last week approved of plans submitted by the Helmsley Timber Co., Ltd., for a sawmill, Crowle Street; A. & R. Smith, extensions, Gillett Street; Union Cold Storage Co., Ltd., additions, Blackfriars Gate; Brigham & Cowen, Ltd., workshops and offices, Hedon Road; Hull Oil Manufacturing Co., Ltd., additions, Stoneferry; British Petroleum Co., Ltd., dairy coates; T. J. Smith & Nephew, Ltd., additions, Neptune Street; G. Clarke, jun. Co., Ltd., additions, Neptune Street; and J. T. Smith & Nephew, Ltd., extensions, Neptune Street.

THE Magherafelt (Ireland) Rural Council having called for a report from Mr. S. J. Kennedy, architect, have decided to carry out repairs to labourers' cottages at an estimated cost of £4,000. Our contemporary, "The Irish Builder," commenting on the report, states that those built of 9-in. brickwork were in urgent need of repair, and those of 18-in. masonry are in need of lesser; that it has been found again and again that cottages built of 9-in. work, except in very sheltered positions, are wholly unsuited to the Irish climate, and are invariably damp, and call upon the Local Government Board to refuse their sanction to this method of construction.

AT the last meeting of the Martley Rural District Council a letter with respect to housing was received from Mr. Willis Bund. In the course of discussion it was stated that in the scattered Martley district it would not be possible to erect houses in a block, but in pairs or singly. It was emphasised that the houses must be near the man's work, and it was generally agreed that the most practical way in which the housing question in the Martley district could be helped was by the Government giving assistance to private owners and to local authorities who were providing for their workmen. It was decided to reply to this effect.

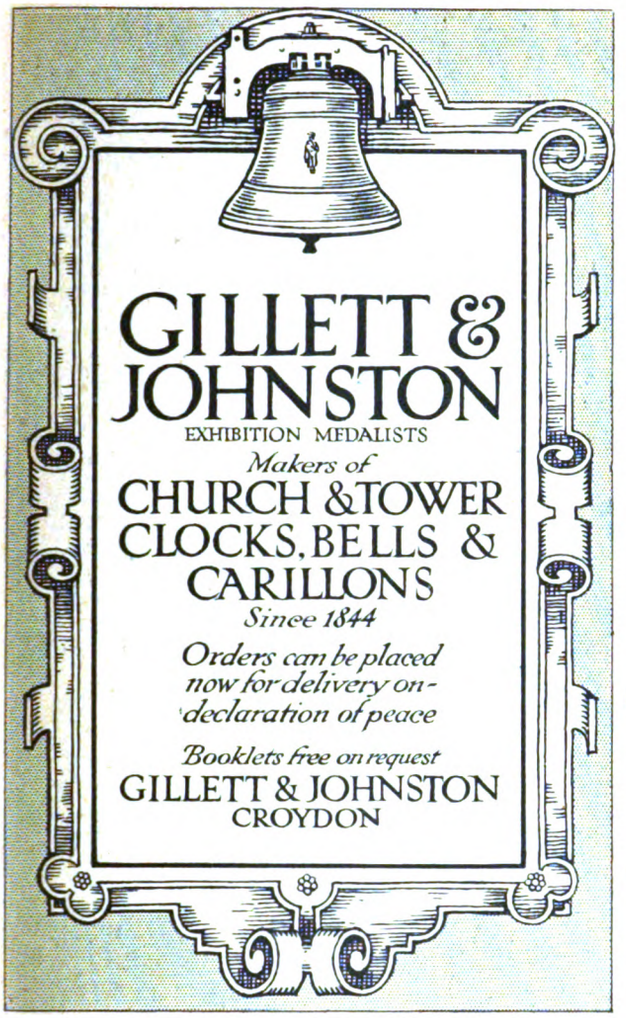
UNDER the presidency of Mr. John Rankin a Regional Association for Liverpool and district has been formed. The object in view is the systematic collection and co-ordination of data—physical, biological, historic, economic, and social—of the Liverpool district, and the production of maps to illustrate the information. By means of the association it is hoped to secure the co-operation of local antiquarians, scientific bodies, &c. A good start has been made during the past few months in surveys of Wirral, under the direction of Mr. H. J. E. Peake, of Newbury, Oxford. Professor Roxby and Mr. Peake have been elected vice-presidents, Miss Bright hon. secretary, and Mr. Horace Fleming hon. treasurer.

THE following agreement has just been arrived at in the Norwich building trades:—"It is hereby agreed that the rate of wages to all trades shall be increased by 1½*d.* per hour as from September 1 next for a period of six months—*i.e.*: Bricklayers 10½*d.* to 1*s.*, carpenters and joiners 10½*d.* to 1*s.*, plasterers 10½*d.* to 1*s.*, plumbers 10½*d.* to 1*s.*, painters 9½*d.* to 11*d.*, labourers 8*d.* to 9½*d.* The members of the Master Builders' Association having taken into consideration the hardships on the employed owing to extra cost of living, have consented to pay from June 1 last to September 1 next, a bonus of 12½ per cent. on the rate of wages agreed on August 31, 1917. Existing rules, apart from the question of wages, to remain in force.—(Signed for the employers) W. T. Scarles, W. Stacy Daws, W. Smith. (Signed for the operatives) J. H. Barnes, W. J. Ladbrooke, R. J. Holman."

THE proposals of the Government for affording financial aid to housing schemes of local authorities were considered at an adjourned conference of representatives of municipalities in Lancashire and Yorkshire in Manchester. The Lord Mayor presided. A resolution was passed expressing the opinion that the whole of the deficit on approved housing schemes should be borne by the State, inasmuch as the extra cost was due to the war and national urgency. The conference was, however, willing to recommend local authorities to become responsible for twenty-five per cent. of the annual deficit on condition that the annual liability did not exceed the amount produced by a penny rate. The conference passed further resolutions one of which urged the Government to accumulate stores of raw materials and sell to local authorities such quantities as may be necessary, at practically cost price.

A CASE was heard at Monmouth Assizes last week by Mr. Justice Laurence between Messrs. George Bull and W. Ponsford, both of Newport. The claim was for damages for breach of a contract to supply second-hand steel joists and the return of a certain sum paid for joists not delivered. Counsel announced there was a "set-off" on the action which could be agreed to. The transaction arose as the result of defendant arranging to buy steel joists which had been used for piling in the Manchester Ship Canal from Messrs. McAlpine & Co., and contracting to supply plaintiff with steel joists after they had been separated from the "scrap." Plaintiffs paid £900 to the defendant in separate sums of £300 in order that he could purchase from Messrs. McAlpine & Co., but in the end Messrs. McAlpine, not getting the £1,000 asked for from Mr. Ponsford, ceased sending the second-hand joists, as arranged, to him. After a long hearing the Judge gave judgment in favour of the plaintiff for £1,340, with costs. He said there was the opportunity of both parties making good profits. He thought it was due to mismanagement the profits had not been made.

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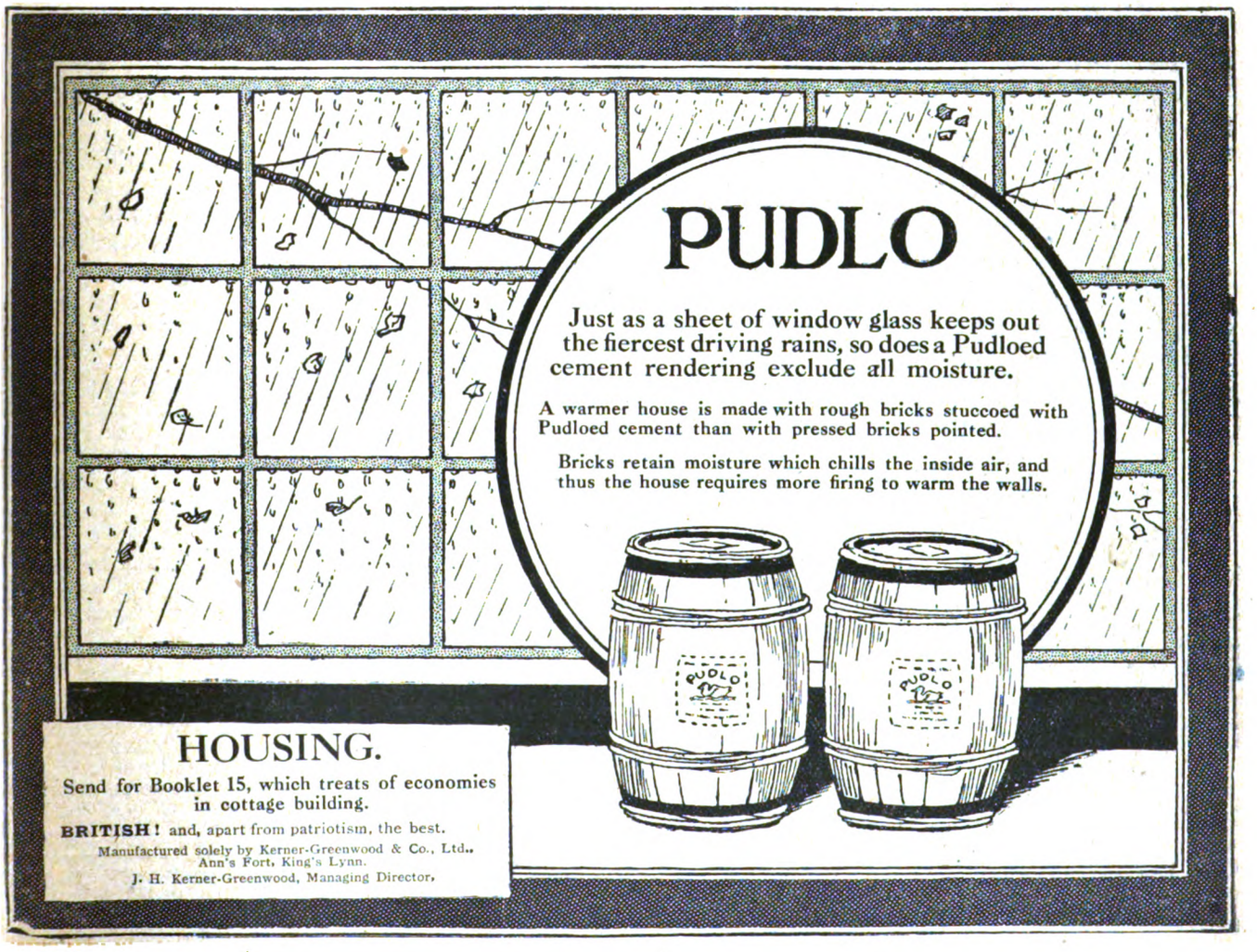
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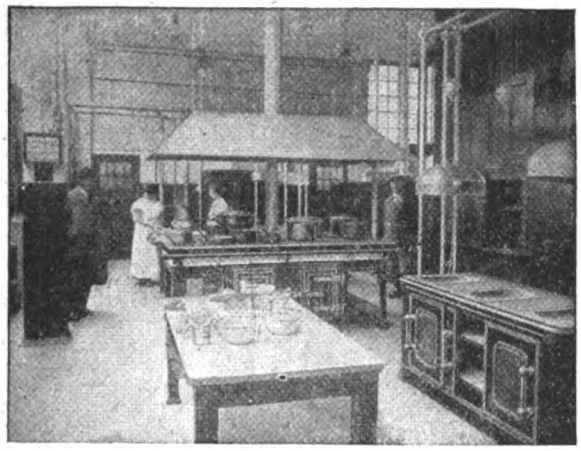
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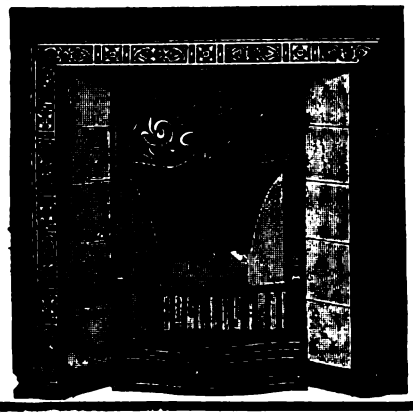
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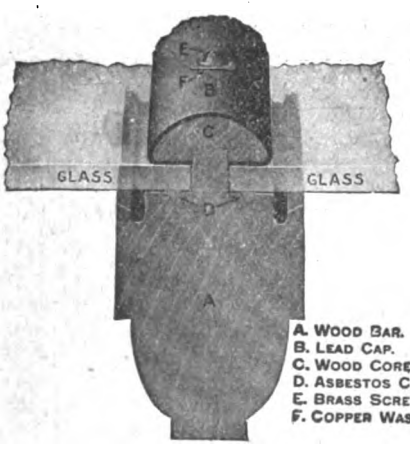
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Bars, Caps, and Fittings supplied for purchasers' own fixing, if necessary.
Stock-length Bars, Caps and Fittings packed in crates ready for shipment.
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THE
Architect and Contract Reporter.
FRIDAY, JULY 12, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

The Editor will be glad to receive from Architects in London and the Provinces results of Competitions and Tenders and other particulars of Works in progress in which they may be interested.

We have upon our staff a very eminent Barrister, who will be glad to answer in the columns of this paper any legal question that may be of interest to our readers. All letters must be addressed "Legal Adviser," Office of "The Architect," Imperial Buildings, Ludgate Circus, London, E.C.

COMPETITIONS OPEN.

SAO PAULO (BRAZIL).—Sept. 7.—H.M. Consul at Sao Paulo has forwarded a supply of plans and instructions (in English) in connection with an international competition of plans and designs for the construction of a national monument for the purpose of "perpetuating the date of the proclamation of the independence of Brazil and to render homage to the principal historical figures who took part in this momentous occasion." The monument is to be erected on the site of the Ypiranga hill, in the State of Sao Paulo. Granite and bronze are to be the chief materials employed in this work, the total cost of which is not to exceed 1,000 contos of reis (1,000,000 milreis) currency. Department of Commercial Intelligence, 73 Basinghall Street, E.C. 2.

CONTRACTS OPEN.

CORK.—July 15.—For building a store in Kyrls Street. Plans and specifications by Messrs. W. H. Hill & Son, architects, South Mall, Cork, to whom tenders must be sent.

DUBLIN.—July 25.—For erection of dwellings for the working classes on Fairbrothers' Fields area, Dublin, for the Housing Committee, Corporation of Dublin (subject to sanction of Local Government Board loan). City architect. Total number of houses to be erected can be seen on reference to advertisement on page 16.

GREENOCK.—July 15.—For alterations to buildings 3 Shaw Place for the Corporation. Specification and plan on application to Master of Works, Municipal Buildings. Tender to town clerk.

HALIFAX.—July 23.—For painting exterior of Stoneyroyd Hospital and outbuildings. Mr. J. Lord, M.I.C.E., borough engineer, Town Hall, Halifax. Deposit £1. Tender to Mr. P. Saunders, town clerk.

LONDON.—July 17.—For painting outside iron and wood work of Richmond Military Hospital. Architect, Mr. E. J. Partridge, F.S.I., Bank Chambers, Richmond.

LONDON.—July 22.—For construction of surface-water drain at Wandsworth Cemetery, Wandsworth, for Borough Council. Mr. P. M. Dodd, M.I.C.E., 215 Balham High Road, S.W. Tenders to Mr. D. A. Nicholl, town clerk, Wandsworth, S.W.

MOWSLEY, LEICESTER.—July 19.—For extensions to sanatorium consisting of pavilion to accommodate ten beds, brick and slate construction, drainage, water supply, and other work therewith. Plans and bills of quantities of Mr. T. McCarthy, architect, Council Chambers, Coalville. Tenders to Mr. W. L. Freer, clerk to County Council, 10 New Street, Leicester.

RISHWORTH, YORKS.—July 18.—For construction of reinforced concrete gauge basins and small concrete dam, also laying 200 lineal yards of 18-in. cast-iron pipes in township of Rishworth for Wakefield Corporation. Mr. C. C. Smith, M.I.C.E., waterworks engineer, Town Hall, Wakefield. Deposit £1 1s. Tenders to Town Clerk, Town Hall, Wakefield.

TOTTENHAM.—July 20.—For repair of tar and asphalt paving for District Council. Major W. H. Prescott, R.E., surveyor, Town Hall, Tottenham, N. 15. Tender to Mr. R. C. Graves, LL.B., clerk, Town Hall, Tottenham, N.

TENDERS.

LONDON.

For the supply and erection of a water-tube boiler at the electric generating station, for the Hammersmith Borough Council Electricity Committee.

Richardsons, Westgarth	£6,187 0 0
Clarke, Chapman & Co.	5,235 0 0
Babcock & Wilcox	4,694 0 0
Stirling Boiler Co.	4,660 0 0
J. Thompson	3,725 0 0

MENSTON (YORKS.).

For erection of twenty piggeries at Stocks Hill, Menston, for the Menston Pig Club. Mr. H. RIDING, architect.

J. RENWICK & SON, Otley (*accepted*) . . £600 0 0

SALFORD.

For supply of (*a*) 4,600 yards of 6-in. glazed stoneware pipes, and (*b*) 18,400 hard-burned glazed stoneware tiles.

ALBION CLAY CO., Woodville—(*a*) £747 10s.; and (*b*) £94 15s.

THE Furness Shipbuilding Co., Ltd., propose to erect workmen's houses at Haverton Hill, Stockton-on-Tees.

THE Carmarthen Town Council has appointed a committee to select building sites for 200 houses.

THE works of the British Pencil Co. in Mill Lane, Carshalton, were destroyed by fire last week.

THE address of the Controller of Timber Supplies is now 80 Newman Street, Oxford Street 1, and the telephone No. Museum 4240.

A YEAR has elapsed since the death of Sir Herbert Tree, and his friends are forming a committee to commemorate his memory by the erection of a bronze gilt tablet to be fixed on the wall of His Majesty's Theatre (at the corner of Charles Street and the Haymarket), a spot which must be ever associated with his memory and where his happiest and proudest years were spent. Any one desiring to join in the memorial is requested to send a subscription to the Hon. Sir Charles Russell, Bart., secretary of the Tree Memorial Committee, Garrick Club, Garrick Street, W.C. 2. A model of the memorial, designed by his lifelong friend, Mr. W. H. Romaine Walker, can be seen at the latter's offices, 6 Old Bond Street, W. The Department of Woods and Forests has given permission for the erection of the memorial, and Messrs. Grossmith & Laurillard, the lessees of His Majesty's Theatre, have agreed to preserve it and keep it in order. Mr. Asquith has consented to unveil the memorial.

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Contractors for the **Main Buildings** and **Great Stadium** for the **Franco-British Exhibition, London, 1908.**
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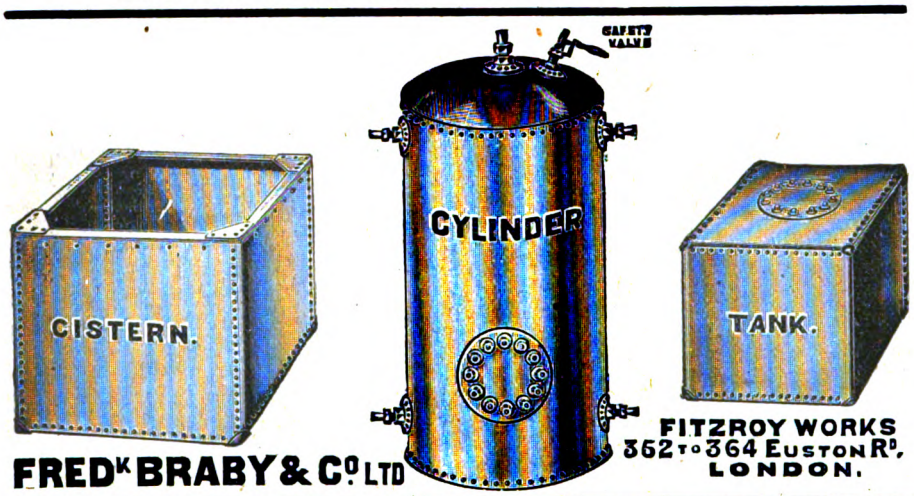
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JAMES D. ROOTS, Consulting Engineer and Patent Expert. British Foreign and Colonial Patents. Designs and Trade Marks obtained at moderate charges. Building Engineering Patent Specialist and Adviser. Advice to Inventors free. Long and varied practical engineering experience valuable to Inventors. Contributor of Patent Abstracts to "The Times," to this Journal, and for years formerly to "The Engineer." Patent Information and Abstract of Patent and Designs Act of 1907 sent post free on request.—THANET HOUSE, Temple Bar, 231 Strand, London, W.C. 2.
Tel. Ad.—"*Oaktree, London*," *Teleph.*—12327 *Central.*

The Telegraphic Address of "The Architect" is **"Architonia, Fleet, London."**

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THE LABOUR-SAVING HOUSE.

THE thought of five hundred thousand new homes to be planned in the near future has set many "furiously to think," and should lead most women to attend the lantern lectures on home planning arranged for students at the London County Council Women's Institutes, of which there are thirty-seven in various parts of London.

Every woman knows more or less vaguely what she would like as a dwelling-house, but something more practical than that is necessary to enable investigators to formulate suggestions which can be useful to architects and builders.

Mr. Robert W. S. Weir opened out a wonderful vista concerning "Standards of Possibilities" in his address to teachers on this subject at the London Day Training College, Southampton Row, on May 14 last. He recognised that the value of good home environment for persons in all the social grades is very great, and a national asset of the first importance. Housing problems are social problems which can only be successfully attacked by those who have made a careful study of the details in all their complexity, and have gained accurate knowledge of what is and what might be. Only by study of the fundamentals can women's opinion become forcefully constructive.

For example, it is a new idea to most persons that the narrow frontage method of selling land need not dominate town planning, and that another arrangement might provide living rooms with more light and air than falls to the share of most town houses. Very few persons have got to grips with the limitations which cramp the ardent home planner, such as the economical allocation of money for different parts and purposes; the need for confining desires within the space of the cubic feet which can be afforded; the difficulty of finding ground to fit particular needs, and the cost of houses of various types in relation to the rent and other charges.

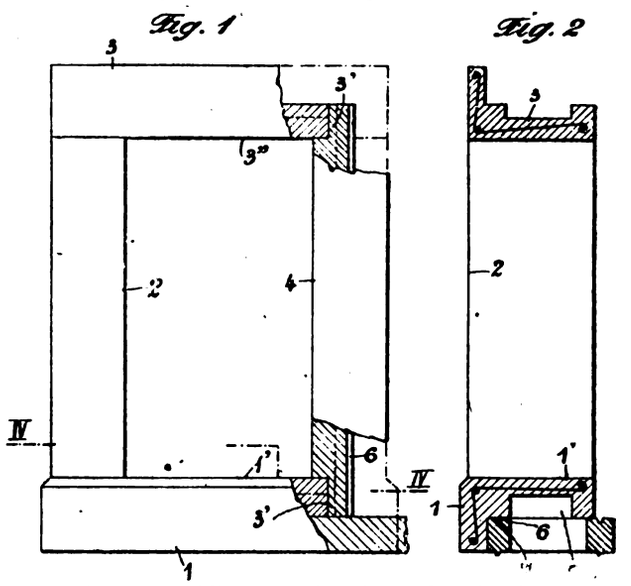
It is not the work of a moment to form wise decisions, and it is impossible to attain thereunto at one bound. Women are taking up their public responsibilities with a high seriousness, and will study that they may cope with their duties wisely as soon as they realise that such study is the only way to get a well-balanced knowledge of values and sound ideals; also to attain wise conservation of energy. The organisation and administration involved is very complex, but "it is better to work for others than to think for them. Some day the world will learn to have a greater respect for the worker than for the thinkers," and the purpose of these classes is to encourage students to think for themselves.

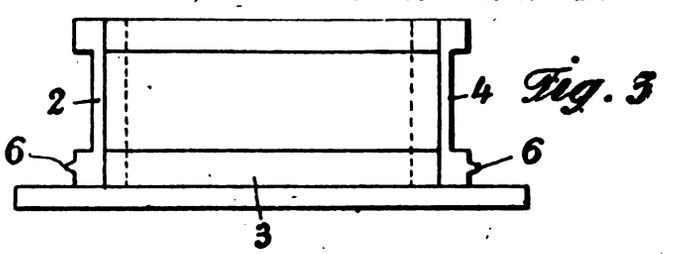
BRITISH PATENT SPECIFICATION.

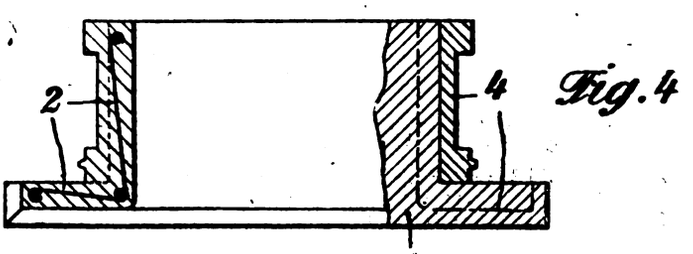
Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 105,924 (April 25, 1917).—Improved Framing of Reinforced Concrete for Door and Window Openings, and the like. Armand Ducret, 16 rue Industrielle, Montreaux, Switzerland, contractor.—This invention has for its object to provide an improved disconnectible reinforced concrete framing for door and window openings and such like apertures or recesses. The invention consists of a reinforced structure for window and door frames adapted to be built up with the surrounding building structure or inserted into an existing structure and subsequently removed therefrom when desired without interference with the existing structure, comprising a plurality of interfitting angular members in which after the insertion of the last completing member the other members are retained in their proper position. Fig. 1 is an elevation thereof. Fig. 2 is a vertical section. Fig. 3 is a plan of the top, and fig. 4 is a horizontal section on the line IV-IV of fig. 1. The frame comprises four members, 1, 2, 3, and 4, fig. 1, each member being formed right angular in cross section. The sill 1 rests with the bearing faces of its horizontal plate 1^1, fig. 2, upon the wall forming the bottom of the opening in the wall of the building, the under face of the sill is formed with a channel 5, extending the whole length of the said underface for the purpose of economising material and diminishing weight. In addition to the channel 5 the front portion of the bearing face may be formed with a tongued piece 6, fig. 2, which can engage in groove 7 in the building wall. The upright members 2 and 4 are formed of similar section to the sill, and each front-bearing face is provided with a tongue piece 6, figs. 1 and 3, for engaging in the groove of the respective side of the opening in the building wall against which the upright member will bear. Each upright member is formed with a shoulder at the lower part which fits against the upper surface 1^1 of the sill, and at the upper part of each upright member a shoulder is formed upon which the transom 3 rests; the extended ends 3^1 fit behind the flanges of the members 1 and 3. The transom is made of similar section to the other members, but the front-bearing face is made perfectly flat. The framing is prevented from being moved when fixed in position by the tongue 6 engaging in the respective grooves in the building wall. The front faces of the several members 1 to 4 may be decorated with moulded faces, and if desired the several said members may be provided with devices for the purpose of connecting the parts together.—May 22, 1918.







THE death is announced of Mr. William H. B. Castle, of the firm of Castle & Son, rating valuers and surveyors, of 40 Chancery Lane, W.C., aged eighty-one.

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in the management of a factory, a business house, or a home? If so you must use that influence in the interests of national economy—to help pay the cost of the war and preserve our financial stability among the competing nations.

One way—one very important way—in which you can do this is by looking seriously into the fuel question. The Prime Minister has told us that "coal is everything to us—coal is the most terrible of enemies and it is the most potent of friends". It is the principal natural wealth of the nation; yet we waste it—and with it all the valuable constituents which could be recovered for use if it were scientifically treated in gas works—to the amount, at a very conservative estimate, of 50 million tons annually.

This could not be excused even if our coal reserves were inexhaustible. But they are not. They are not even so great as those of some of our keenest commercial rivals. Germany's stocks are more than twice as large as our own, those of the United States over 20 times as large. These figures point to a time when, if the present utterly disproportionate rate of consumption continues, we shall be forced to become importers instead of exporters of coal—with disastrous results to the material supremacy which we shall fight to establish after the war.

"Save Coal" should therefore be a national watchword.

Write to us for free booklets and other information which will show you how this end can be attained in factory and home alike with increase of efficiency and decrease of every kind of waste.

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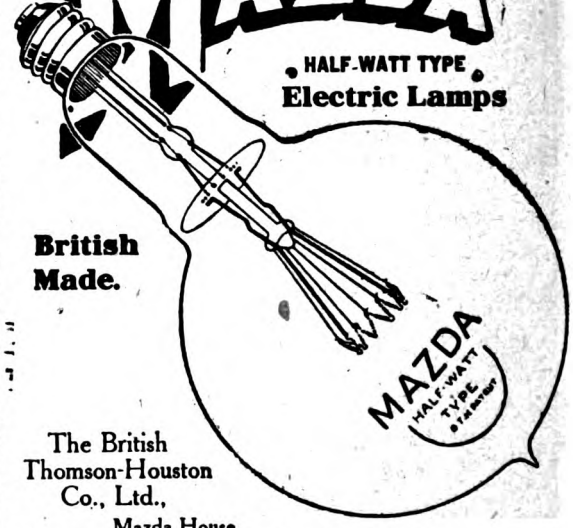
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PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 115,763 (Oct. 2, 1917).—Ladislav Kaplan and C. H. B. Stepanck, 506 East 19th Street, New York.—Calipers.

115,760 (Sept. 17, 1917).—E. D. Halstead, 5 Livingstone View, Wesham, Kirkham, Lancs., and James Worthington, 21 West View, Kirkham, Lancs.—Means for locking or fastening windows, sliding shutters, and such like.

115,782 (Jan. 7, 1918).—E. R. Koechlin, Hamerstraat 20, Amsterdam, Holland.—Parallel guides for rollers.

104,186 (Feb. 16, 1917, dated under International Convention, Sept. 22, 1914).—Mannesmann-rohren-Werke, Dusseldorf, Germany.—Machine for the flanging of pipes.

104,680 (Feb. 27, 1917, dated under International Convention March 10, 1916).—G. F. Pearsons, 70 5th Avenue, New York.—Fire extinguishers.

116,114 (April 19, 1917).—Spray Engineering Co., 93 Federal Street, Boston, Suffolk, Mass., U.S.A.—Method and tools for applying coatings.

116,125 (March 24, 1917).—W. E. Muntz, 6 Bream's Buildings, Chancery Lane, E.C.—Taps or valves.

116,194 (Aug. 22, 1917).—W. A. Smith, 13 Sykes Lane, Oakworth, near Keighley.—Domestic fireplaces.

116,206 (Oct. 5, 1917).—Evered & Co., Ltd., and Charles Willmott, Surrey Works, Smethwick.—Casement stays for hinged windows and other hinged articles, and 116,210 (Oct. 9, 1917).—Stays for casements and the manufacture of the said stays.

116,218 (Nov. 7, 1917).—F. H. Biggers, Staffords Road, Mount Kembla, via Wollongong, New South Wales.—System for the detection of outbreaks of fire and also for extinguishing and checking such outbreaks.

115,864 (March 28, 1917).—John Shanks, Tubal Works, Barrhead, Renfrewshire, sanitary engineer.—Water closets.

115,872 (May 17, 1917).—William Clifford, A.M.I.C.E., Oxley Cottage, Oxley, Wellington, Stafford, and Jones & Attwood, Ltd., Titan Works, Amblecote.—Separation and treatment of solids and semi-solids from sewage liquids and analogous liquids.

115,879 (May 19, 1917).—D. B. Campbell, Norman Hotel, Leinster Gardens, Bayswater, and D. T. Cameron, 95 Inchemery Road, Catford.—Wood sawing machines.

115,904 (May 24, 1917).—J. F. Barr, Lakeview Mansions, Toronto, Canada.—Electrical water heating apparatus.

115,920 (June 6, 1917).—H. J. Fogg, 14 Cook Street, Liverpool, architect.—Building roofs.

115,921 (June 8, 1917).—G. R. Beckett, 52 Denmark Road, South Norwood, S.E. 25.—Adjustable step ladders.

115,923 (June 9, 1917).—D. J. Green, 61 Queen Alexandra Road, North Shields.—Ventilators.

115,933 (June 19, 1917).—Richard Ames, 145 Ditchling Road, Brighton, Sussex.—Apparatus for aerating sewage and other foul liquids.

115,946 (June 27, 1917).—H. W. Charlton, Jones Point, Rockland County, New York.—Method of manufacturing cementing materials and products thereof.

115,950 (July 7, 1917).—Shaw & Carter, Ltd., and G. F. Carter, Bull Ring, Birmingham.—Fastenings for sliding sashes of windows, vertical sliding bars, gates and the like.

115,952 (July 12, 1917).—Joseph Gridley, Belmont, St. John's Road, Hampton Wick, Middlesex.—Glazing.

115,974 (Aug. 1, 1917).—E. P. Wells, 94 Larkhall Rise, Clapham.—Roofs for hangars, factories and other structures.

115,984 (Aug. 11, 1917).—A. H. Smith, Beechy Knowle, Richmond, Sheffield.—Band saws.

115,985 (Aug. 11, 1917).—F. W. Campbell, 9 Upper Queen Street, Belfast.—Concrete piles.

115,981 (Aug. 7, 1917).—John Davis & Son (Derby), Ltd., and W. H. Davis, All Saints Works, Derby.—Slide rules.

116,008 (Sept. 26, 1917).—Owen Lindley, 9 Hamilton Road, Highbury Park, N. 5.—Saws.

116,015 (Oct. 4, 1917).—K. R. J. Lagus, Slottsgatan 30, Abo, Finland.—Machine saws.

116,028 (Nov. 8, 1917).—J. W. B. Fowells, 82 Lothian Road, Middlesbrough, and A. E. Alcock, 91 Oxford Road, Middlesbrough.—Reinforced concrete screw piles.

116,035 (Nov. 26, 1917).—William Bardsley, 31 Kearney Avenue, Kearney, Hudson, New Jersey, U.S.A.—Door checks and closers.

116,056 (Feb. 12, 1918).—Daniel Palmer-Jones and the Patent Rapid Scaffold Tie Co., Ltd., 42 Lansdowne Road, Stockwell.—Scaffolding or the like temporary erections.

Any of the above specifications may be obtained from J. D. Roots.

MR. WILLIAM HOLLAMBY, retired builder, Tunbridge Wells, died last week, aged seventy-eight years.

EX-BAILIE LAUDER, builder, a prominent public man in Inverurie, N.B., passed away last week in his seventieth year.

LAST week Mr. Arthur Cartmell, builder and contractor, appealed successfully at Preston Sessions against a conviction by the Blackpool magistrates for an alleged breach of the Petrol Order, his costs being allowed.

THE "Board of Trade Journal" states that H.M. Trade Commissioner in Australia reports the receipt of the following inquiries:—Ironmongery and builders' specialities.—A firm in Adelaide desires to obtain agencies for South Australia, on a purchase basis, for United Kingdom manufacturers of household ironmongery lines and builders' specialities.

AN association has been formed of those who come under the heading of "One-man Business Proprietors," its objects being to look after the interests of its members both during and after the war. The association has received the official recognition of the Ministry of National Service. Practically every trade and profession is represented among its members. Those interested should apply to the Honorary Secretary, "One Man Business Association," c/o Anderton's Hotel, Fleet Street, London, E.C. 4, who will be pleased to forward all particulars regarding the association.

THE following linings have been granted at Glasgow Dean of Guild Court:—George Green, Ltd., 843 Gallowgate, to erect a picture house on the west side of Lorne Street, Govan; Bryant & May, Ltd., match manufacturers, Fairfield Works, Bow, London, E., to alter and add to buildings in Shuna Street; the Ioco Roofing Co., Ltd., Netherton Works, Anniesland, to erect a boiler-house, stores, and laboratory; Gauldie, Gillespie & Co., Ltd., engineers, Broomhall Engineering Works, Kinning Park, to erect a new erecting shop there; Glasgow Corporation, to erect cold storage buildings between Stockwell Street and Old Wynd; Alexander Brown's trustees and Mrs. Mary J. Gunn's trustees, to erect offices into dwelling-houses at 100-102 Burnside Street.

A LOCAL Technical Advisory Committee has now been set up in Edinburgh by the Ministry of Labour and the Ministry of Pensions to deal with questions arising in connection with the training of discharged disabled sailors and soldiers in the various branches of the building trade. The employers' representatives on the Committee are:—Messrs. G. Carfrae (painting), H. Fisher (plastering), W. Forrest (building), A. Y. Howie (plumbing), W. Lang (wood machining), N. M'Leod (building), and J. R. Watson (joinery). The operatives are represented by:—Mr. A. Cameron (painters), Mr. P. D. Macaulay (masons), Mr. H. M'Kay (plasterers), Mr. T. Meldrum (joiners), Mr. J. Mentiplay (plumbers), Mr. A. Rankin (wood machinists), and Mr. T. M. Strachan (bricklayers). Representatives from other interested bodies are—Councillor Graham (Edinburgh Local War Pensions Committee), Mr. J. N. N. M'Intosh (Heriot-Watt College), Mr. D. M'Nally (Edinburgh School Board), Mr. W. B. Sievwright (Ministry of Pensions), and Mr. Sutherland (College of Art). Mr. W. Forrest has been elected chairman, and Mr. T. M. Strachan, vice-chairman. The secretary is Mr. J. T. Edwards, manager of the Ministry of Labour Employment Exchange, 174 Lauriston Place, Edinburgh.

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VARIETIES.

EXTENSIVE damage has been caused by fire at the mill of Messrs. J. Radcliffe & Co., of Rochdale.

THE Stockton Town Council are considering a proposal to extend the electricity works.

MR. E. FINCH, engineer to the City of London, has joined His Majesty's Forces with the consent of his committee.

THE Batley Town Council Working-men's Dwellings Sub-Committee reported at the last meeting the offer of 10,000 square yards of land near Dewsbury Gate Road.

LAST week a serious fire broke out in the Craigie Jute Works, Dundee. Damage was done to the estimated amount of £2,000.

THE Town Council of Peterhead, during the absence of Mr. Dickie on military service, have appointed Mr. William West, builder, of Gateshead, temporary surveyor.

THE Urban District Council of Elland have received sanction to borrow a sum of £2,000 for extensions in connection with the electricity works.

WILMSLOW Urban District Council, owing to the high cost of labour and materials, have decided to postpone their scheme for the erection of a new town hall and offices.

IT is proposed at the close of the war to erect on a building site near the Elephant and Castle, Kennington, S.E., a new theatre.

A NEW sanatorium is to be erected at East Kirby, Nottingham, and on Saturday last a hospital memorial demonstration was held on behalf of the funds.

BOULTHAM (Lincs.) is to be very considerably developed at the close of the war; the owners of an estate contemplate the erection of about one thousand houses.

MR. J. F. MCMULLEN, of 30 South Mall, is the architect for the work to be carried out at the South Charitable Infirmary and County Hospital.

AT the present time over 200 examples of the work of Mr. Robert Bryden, Ayr, are on exhibition in the Carnegie Library, Ayr, consisting of paintings, etchings, &c.

THE death has taken place of Mr. Isaac Beardmore, J.P., one of the founders of the well-known firm of steel manufacturers, Beardmores, of Parkhead Forge, Glasgow.

THE plans submitted by Mr. G. Beatty, surveyor, Ashington, for a new operating theatre and additional ward accommodation at the Knight Memorial Hospital, Blyth, have been approved by the Joint Hospital Committee.

ON Saturday evening a serious fire broke out at the coopery and warehouses of Messrs. Allman & Co.'s distillery, Bandon, Ireland, when damage to the cost of several thousand pounds was caused.

THE town of Crickhowell has been presented the ruins of the historic Crickhowell Castle by Mr. Gwilym C. James, J.P., of Llanwysg, Crickhowell, as a memorial to his son, Lieutenant C. B. James, who fell in action in Flanders.

THE late Mr. Robert Southworth, of Fairfield, Clitheroe, cotton manufacturer, left £1,000 to the chairman and treasurer of Clitheroe Conservative Club towards the building of a new club house.

THE "Land Union Journal" announces that in consequence of the greatly increased cost of production and to limit the use of paper, the Land Union have decided that the journal shall only be published in future quarterly, and the next issue will therefore appear on September 1

ALDERMAN ROBINSON, speaking at the last meeting of the Stockton Town Council, stated that the provision of 1,000 houses for the borough would cost a sum approaching a quarter of a million. The proposal was to erect twelve houses to the acre, each house to have a plot of land.

IT has been decided to endeavour to raise sufficient money for the purpose of erecting three churches at Boultham, in Lincolnshire, where considerable building operations are contemplated on the Boultham estate at the termination of the war.

THE death is announced of Mr. Benjamin Cosser in his seventy-eighth year, architect, Birmingham. From 1862 to 1882 Mr. Cosser was in practice with the late Mr. J. J. Bateman, and after that by himself until his retirement in 1913.

MR. H. J. C. WINTERTON, of the firm of Winterton & Sons, auctioneers and surveyors, of Lichfield, has purchased land in the village of Wolvey which he is presenting to the village as a site for the erection of a public hall or recreation room.

MR. H. SEYMOUR BERRY, of Merthyr, announced last year that it was his intention to erect and equip a school at a cost of £10,000 in memory of his father. The proposed Technical College has now received an amount of £12,000 from Messrs. Guest, Keen & Nettlefold towards its endowment.

ON Monday last the Archbishop of York unveiled a metal effigy placed on the Eleanor's Cross to the memory of Lieutenant-Colonel James Mortimer, C.M.G., who commanded the 5th Yorkshire Regiment, and who fell in France in 1915. Also to his two brothers-in-law, Captain Woodcock, 5th Yorks, and Lance-Corporal Harry Woodcock of Princess Patricia's Canadian Light Infantry, both killed in France.

H.M. THE KING, replying to an address from the L.C.C., stated that "The absorbing interest of the war must not blind us to the work to be done at home. It is a debt which we owe to the men now under arms to look to the well-being of those whom they are risking their lives to defend, and to make provision for the day of their return." There was no suggestion here of after the war, but now. Nearly all the schemes which are being discussed are after the war; but why not now?

THE Hunter Archæological Society (Sheffield) made an excursion to Handsworth parish church on Saturday, where Mr. J. B. Wigfull, architect, hon. secretary of the society, read an interesting paper and afterwards conducted the party to the various objects of historic note in the vicinity. The church, he said, was an ancient rectory. Excessive and injudicious restoration had destroyed many of the historic features of the building, which dated from the latter part of the twelfth century.

THE early publication is announced of an important book on "The English Home from Charles I. to George IV.," by the well-known authority Mr. J. Alfred Gotch, F.S.A., through Messrs. B. T. Batsford, Ltd. The volume treats of houses, interior decoration, and garden design, and is very fully illustrated. It is uniform with the author's earlier book on "Early Renaissance Architecture," and in the two works Mr. Gotch covers the whole course of evolution of the English house from the time of the Tudors to the end of the eighteenth century.

AT the last meeting of Dundee Housing and Town-Planning Committee power was requested to negotiate for supplies of timber for the three housing schemes projected. Mr. Thomson, the city engineer, said a sum of £60,000 was involved, and he proposed that they should in the first instance make use of the timber on the various estates owned by the Corporation, and that they should afterwards buy direct from landowners. The Committee decided that the operations should meantime be confined to the timber on the Corporation estates, and sanction was given to the installation of sawmill machinery for the cutting up of the wood prior to its being placed in storage.

AT the last meeting of the Highways and Sewage Committee of the Burnley Council the borough surveyor submitted a letter from the secretary of the East Lancashire and District United Trades Committee, enclosing copy of an extract from an award given by the Northern Conciliation Board at Leeds in respect of an application for an increase of wages to all men engaged in the building trade. The following are the clauses in the award affecting the men in this department: (1) The wages of all skilled men to be 1s. 3½d. per hour; (2) the wages of labourers to be 1s. per hour; (3) the same to be made retrospective on and from May 10, 1918. The same to include 12½ per cent. Committee on Production Award (1,152 to the building trade). The Committee resolved that the terms of the award relating to skilled men engaged in the building trade and builders' labourers be applied to such men employed in the department.

AT the annual meeting of the Essex Archæological Society, held at Priests, Romford, by invitation of Mr. and Mrs. P. C. Haydon-Bacon, the Bishop of Barking, deputy-president, occupied the chair. The Chairman proposed the re-election of Mr. J. Horace Round as president; and this was unanimously carried, with thanks to him for his past help and sympathy with him in his illness. The Council in their sixty-fifth annual report said the Society had lost twenty-eight members by death, resignation, and removal, and twenty-two new members had joined. The total membership was 365. They recommended the re-election of the vice-presidents, with the addition of Mr. M. E. Hughes-Hughes, and of the Council, with the addition of Mr. Wykeham Chancellor in the place of his late father. The financial statement showed a small balance in hand. The reports were adopted. Mr. Haydon-Bacon, who was heartily thanked by the Chairman for his invitation, proposed a vote of thanks to the officers; and Canon Lake seconded the motion, which was carried. Thirteen new members were elected. A paper written by the President on "Architecture and local history" was read by the Secretary, Rev. T. H. Curling; and afterwards tea was provided by the host and hostess.

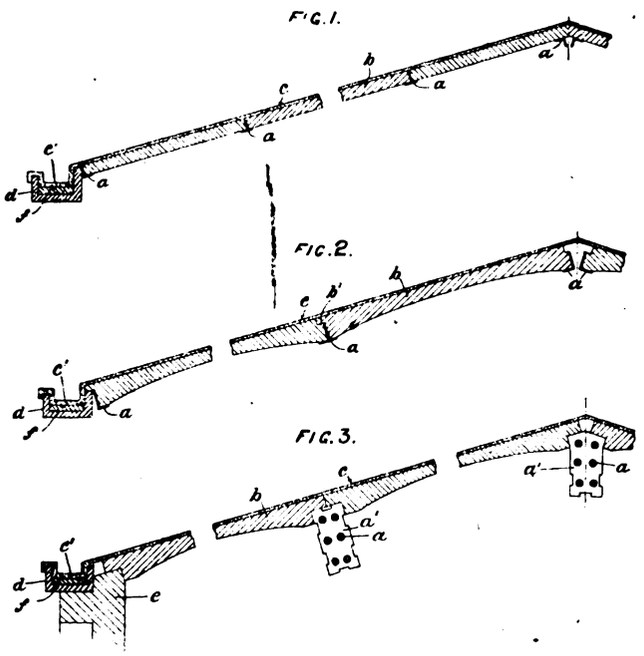
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BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 115,920 (June 6, 1917).—Building Roofs.—H. J. Fogg, 14 Cook Street, Liverpool, architect.—This invention has reference to building roofs of the type comprising main supporting members of metal, concrete or like panels or slabs supported by these main support members, and a covering of waterproof material, and it has for its object to provide an improved roof construction of this kind. Figs. 1, 2 and 3 are cross sections, showing three modifications of the roof. *a* are the metal supporting members, and *b* are the concrete or like panels or slabs, which are supported at their edges or ends on the members *a*. *c* is a layer of rock asphalt, felt, bitumen, tar, waterproof cement, or the like, placed over the whole of the roof surface, and forming a waterproof covering to the panels or slabs, and a sealing to the joints between the slabs and the bearers *a*. *d* is a deep concrete or cement gutter at the lower edge or eave of the roof; and the water or weatherproof outer covering or layer *c* is continued from the roof near the lip of the inner side of the gutter (next which the lowermost metal supporting bar *a* will generally lie), and carried over the whole of the inside of same, and over the outer upper edge or the outer side of the gutter. This portion of the waterproof covering is marked e^1. The metal supporting members *a* lie in the direction of length of the roof, and they are supported upon principals or rafters. In fig. 1 the slabs or panels *b* are flat on both surfaces, and between the ridge of the roof and the gutter the edges of these slabs or panels rest on the flanges of the metal purlins *a*, which are of T-form in this case, and the webs of which extend



upwards, against which the edges of the slabs abut. The ridge members *a* are angle bars, one on each side of the apex of the roof, and without flange under the upper edge of the slab, and the other flange extending downwards; whilst the lower purlin *a* next the gutter *d* is of the opposite arrangement to the ridge support or purlin. In fig. 2 the length of the slabs or panels *b* in the direction of the span of the roof is greater than those shown in fig. 1, and they are arched on their underside, and where the meeting edges come up against the intermediate purlin or longitudinal supporting member *a*, they are rabbeted at b^1, so as to assist in making a watertight joint at this point. The ridge longitudinal metal bars *a* in this case are arranged similarly to the lower members or purlins *a*. In fig. 1 the bearings are small, whereas in the roof in fig. 2 they have large bearings. In fig. 2 the slabs *b* are similar to those in fig. 2, but the longitudinal supporting members *a* consist of a plurality of metal rods *a*, enclosed and carried in a cement concrete body a^1, which may be in a solid body or consist of blocks through which the metal rods *a* are passed, and fastened at each end at the outside of the blocks so as to form a beam. In this case the lower or eave slab *b* is shown resting on the upper edge of the wall *e*, on which also the gutter *b* rests. With regard to the gutter *e* the upper edges of this gutter would be kept at the same level, and a "fall" will be provided in the gutter by introducing cement or concrete *f* in its bottom, the surface of which will incline from one end or part of the gutter to a suitable down spout.—June 5, 1918.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 107,587 (June 25, 1917. Date claimed under International Convention, June 23, 1916).—Wilhelm Hubert, 22 Douzenbachstrasse, and Henry Bosch, 18 Weinerstrasse, Siegen, Westphalia, Germany.—Siphon flushing apparatus.

113,600 (July 25, 1917.—Date claimed under International Convention Feb. 19, 1917).—Lazarus White, 622 West 137th Street, New York.—Method of producing substructures for structures.

116,596 (Oct. 18, 1916).—A. A. R. Lang, 30 Market Street, Greenock, Renfrewshire.—Apparatus for securing a dustless road surface.

116,572 (June 29, 1917).—Charles Hart, Minworth, Birmingham.—Tensioning and severing wire for fencing and other purposes.

116,579 (July 7, 1917).—A. C. Smith, 17 Ferndale Road, Clapham; G. A. Smith, 42 Kingsley Road, Northampton, and J. M. Smith, Benson's Hotel, 5 Black Lion Hill, Northampton.—Cripples for use by builders and others.

116,546 (June 15, 1917).—P. N. Nissen, Major R.E., c/o the Institution of Mining and Metallurgy, 1 Finsbury Circus, E.C.—Joints for corrugated sheets.

116,591 (July 28, 1917).—J. C. Crets, 475 Laan van Meerdervoort, The Hague, Holland.—Roof coverings and damp courses for buildings.

Any of the above specifications may be obtained from J. D. Roots.

IN response to a resolution passed by the London Labour party asking the Local Government Board to call a conference of Greater London housing authorities, Mr. Hayes Fisher states he has good grounds for believing that the L.C.C. Housing Committee is taking action on the lines desired.

LIFT accidents are very numerous in Southwark and the City. All lifts should be placed under the authority of a Government Department. Dr. Waldo, the City Coroner, at an inquest held on Albert Edward Holmyard, who was killed in a lift accident in Cheapside, said such advice he (the Coroner) had tendered in Court and in his official Annual Reports for many years past in the cause of safety and prevention. Nothing, however, so far had been done.

MEMBERS of the Hunter Archæological Society visited Rotherham on Saturday afternoon, and were received at the parish church by the Rev. Canon Goodall (Vicar), who described the principal features of the church. Piers supporting the roof of the nave rest on bases of a former (Norman) church. The Vicar mentioned that the Feoffees of the Common Lands of Rotherham had now conveyed the ancient chapel on the bridge to the Ecclesiastical Commissioners, and, in due time, it was intended to restore the building to its original purposes. The chapel itself, which was afterwards visited, has had a chequered history. After ceasing to be used for religious purposes, the chapel became in turn an almshouse, the parish gaol, and a tobacconist's shop. At the Clifton Park Museum, which next claimed attention, interest centred chiefly in the Roman remains from Templeborough.

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VARIETIES.

RUGELEY District Council propose the erection of eighty workmen's houses after the war.

MESSRS. KNIGHT, FRANK & RUTLEY have sold for a sum of £30,000 the three-cornered site in Glasshouse Street, W.

MR. WILLIAM JAMES MERRETT, retired builder, of Alton, Hants, aged eighty-six, died last week.

CAPTAIN R. G. GOSLETT, A,S.C., a director of Messrs. Alfred Goslett & Co., Ltd., has been awarded the Military Cross.

MR. T. TOOMEY, builder, Barton Street, Gloucester, has been informed that his third son, Prvate S. C. Toomey, London Regiment, has been killed in action.

THE Parks Committee of the Glasgow Corporation have recommended that the vacant position of superintendent of the museums and art galleries, be advertised.

MR. FREDERICK GEORGE CHINNOCK, of the firm of Chinnock, Clarke & Chinnock, estate agents, 11 Waterloo Place, S.W., left estate valued at £109,223.

LIEUTENANT JOHN WEBSTER, R.A.F., previously reported missing, is a prisoner of war. He is a son of Mr. Alex. Webster, builder, of Peterhead, N.B.

MESSRS. ALEXANDER THOM & Co., LTD., printers, Dublin, are proposing to erect extensive printing works on a site in Botanic Road, Glasnevin.

A FACTORY at Netherton, near Dudley, containing a large equipment of valuable machinery, with stocks of timber and completed work, was destroyed by fire on Saturday morning.

CAPTAIN I. BEWLEY, D.L.I., of the firm of Bewley & Scott, builders and contractors, Dunston-on-Tyne, has been awarded the Military Cross.

BARON GLANELLY has subscribed the munificent sum of £25,000 to the University College of South Wales and Monmouthshire towards the cost of erection of chemical laboratories.

DAMAGE to the extent of about £4,000 was caused by fire on Thursday, the 18th inst., to the premises of Messrs. W. & D. Wilkins, builders and contractors, Southsea Avenue, Watford.

THE Bridlington Harbour Commissioners have decided to apply to the Development Committee for a grant of £40,000 for the purpose of improving the harbour, erecting a fish market and offices, and the provision of a deep basin.

THE Perth District Committee have decided to build twelve working-men's houses at Scone and six at the Bridge of Earn. The cost to the district will be equivalent to a half-penny in the £.

THE Bletchley Urban Council have decided, subject to sanction, to purchase four and a half acres of land at a cost of £1,000, on which to erect thirty houses. It is the intention to give liberal garden accommodation.

MR. ARTHUR STOCKWELL, of 11 Pilgrim Street, Newcastle-on-Tyne, has been appointed by the Gateshead-on-Tyne Council architect for the Carnegie Library to be erected near the Shipley Art Gallery.

IT is hoped to raise a sufficient sum for the erection of a children's hospital to be called the Roll of Honour Hospital, Harrow Road. The hospital is to be so named in memory of soldiers, sailors, nurses, and others who have laid down their lives in the war. Princess Mary is to be the Patroness.

THE Bridgwater District Council has considered a suggestion that they should dispose of a portion of land at their depôt as a site for a Sunday school adjoining the Mission church. Some members expressed the opinion that the time might come when they might require this land, and ultimately the matter was left to a committee.

THE Norham and Islandshire District Council have rescinded the recent resolution passed not to erect houses for the working classes in their district, and have decided to adopt the report of their Housing Committee to provide fifty workmen's houses at an approximate cost of £420 per house. The fifty arranged for not to include farm cottages.

THE North Riding Education Committee and the governors of the Northallerton Grammar School are considering the question of the addition of four class-rooms to the school and the erection of a headmaster's house and hostel. The Education Committee have also decided to inform the governors of the Saltburn High School for Girls that the question of increasing the accommodation is under consideration.

MR. HAYES FISHER, replying to Sir S. Roberts' question on the subject of housing for the working classes, stated that the total number of local authorities in England and Wales replying is 1,103. Owing to the form in which the replies have been given it is not possible to state how many houses they consider necessary, but the number probably exceeds 300,000. In 510 cases the number required exceeds 100 houses.

As a sequel to a dispute in the North Staffordshire brick and marl trade an award has been made by the arbitrator, Mr. W. Addington Willis, K.C., to the men concerned of an immediate and further advance of ½*d.* an hour, to date from the week preceding the first making-up day in July, making, with the 1*d.* already given on that date a total of 1½*d.* per hour advance in all.

MESSRS. THOMAS ANDERSON, LTD. (Liverpool), have just entered into the ranks of the Fourth Estate by the production of a monthly magazine under the title of "Protection." Amongst many good hints in regard to Salesmanship, which the Editor offers, is "Always know your delivery is up to the sample you show." This is an admirable piece of advice, and one which editors should carefully bear in mind. How many magazines have had a bright first number as a sample which the subsequent delivery of future issues has stamped as an impostor. We will not anticipate a like result in the present instance. There is an American freshness of style about the contents that English people always welcome, and the slip giving the cap and cuff decorations of the new uniform for the Merchant Service is very well produced. It is only natural that there should be information in this magazine dealing with the firm's insulating material "Palladeum," the jointless finish insulation.

WORKERS in the building industry in Liverpool, Birkenhead, and Wirral districts held a mass meeting on Sunday in St. Martin's Hall, Scotland Road, to consider the position with regard to the wages question. Mr. R. W. Griffiths presided over a crowded attendance. Some time ago the Conciliation Board agreed to advance wages to skilled tradesmen to 1*s.* 6*d.* an hour. This was agreed to by private firms, but the Government declined to accept the arrangement so far as their contracts were concerned. It was reported at the meeting that the Government had agreed to pay the Concilation Board rates of 1*s.* 6*d.* an hour to all skilled trades, and 4*d.* per hour extra to labourers, which brings them up to 1*s.* 2*d.* The 12½ per cent. bonus is not included in the 1*s.* 6*d.* The award will benefit 10,000 to 12,000 men in the district, and it was decided to withdraw the notices which had been tendered. The Liverpool Building Trades Committee has now ceased its work, and the National Federation of Building Trades will deal with all questions affecting building trades workers. Councillor Charles Wilson is the secretary.

AT the Great Northern Central Hospital the series of educational lectures for wounded and convalescent soldiers was given on Friday last by Mr. Shadrach Hicks, Principal of the Shoreditch Technical Institute. Mr. Hicks said that liberty was one of the spiritual forces which had moved men to noble and useful deeds through all ages. He said that it was a very strong quality in the character of the very earliest inhabitants of these islands, and traced its influence upon the history and development of the British people from the early days of the Witan to the present. He rightly drew attention to the great Charter of 1215, and said that on that rock had been built not only British liberty, but also that of the great American Republic, as well as of our Dominions beyond the seas. The future of the country was in the balance, and liberty in its widest and best sense would enable the people to produce a better standard of living and to develop personal character and the material resources of the Empire to their fullest extent. The men expressed their grateful thanks to Mr. Hicks, who promised to deal on a subsequent date with a similar subject.

THE Incorporated Church Building Society held its monthly meeting on Thursday, July 18, at 7 Dean's Yard, Westminster, the Hon. Sir E. P. Thesiger, K.C.B., in the chair. There were also present: The Rev. Canon G. R. Bullock-Webster, the Rev. Canon H. E. Trotter, and the Rev. G. B. Vaux, Sir Edwin Grant-Burls, C.S.I., Mr. E. G. Antrobus, C.M.G., Mr. George Cowell, F.R.C.S., Mr. Ronald E. Bill, Mr. H. P. St. John, and the Rev. T. T. Norgate, F.R.G.S., F.R.Hist.S., Secretary. Grants were made in aid of providing a chapel in connection with a women's club at a munition centre, £75; towards enlarging the churches at Gillingham (parish church), Kent, £200; and Holly Bush, All Saints, near Ledbury, £50; and towards repairing the churches at Brentford, St. Paul, Middlesex, £50; and Hartland, St. Nectan, Devon, £100. Grants of £175, £150, and £100 respectively were paid towards the provision of three mission churches or hostel chapels in certain munition centres. The society accepted the trust of a sum of money as a repair fund for the church of the Holy Trinity, Derby. The above-mentioned grants are in aid of schemes of pressing importance such as the society is being continually called upon to assist, and it is hoped that Churchpeople will realise the need for supporting this venerable society which is now exactly a century old.

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THE
Architect and Contract Reporter.
FRIDAY, JULY 19, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than* 2 P.M. *on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

The Editor will be glad to receive from Architects in London and the Provinces results of Competitions and Tenders and other particulars of Works in progress in which they may be interested.

We have upon our staff a very eminent Barrister, who will be glad to answer in the columns of this paper any legal question that may be of interest to our readers. All letters must be addressed "Legal Adviser," Office of "The Architect," Imperial Buildings, Ludgate Circus, London, E.C.

COMPETITIONS OPEN.

SAO PAULO (BRAZIL).—Sept. 7.—H.M. Consul at Sao Paulo has forwarded a supply of plans and instructions (in English) in connection with an international competition of plans and designs for the construction of a national monument for the purpose of "perpetuating the date of the proclamation of the independence of Brazil and to render homage to the principal historical figures who took part in this momentous occasion." The monument is to be erected on the site of the Ypiranga hill, in the State of Sao Paulo. Granite and bronze are to be the chief materials employed in this work, the total cost of which is not to exceed 1,000 contos of reis (1,000,000 milreis) currency. Department of Commercial Intelligence, 73 Basinghall Street, E.C. 2.

CONTRACTS OPEN.

BARNSLEY.—July 22.—For painting the following schools, for the West Riding Education Committee—viz.: Ardsley (Barnsley) Council junior mixed and infants' schools; Darfield Council school; Royston Council school; Darton, Mapplewell Council school (boys' and girls' departments); Cudworth Barnsley Road Council schools. Mr. P. H. Swire, Chronicle Buildings, Barnsley.

BEDFORD.—July 25.—For repairs at the following schools, for the Bedfordshire County Council Education Committee—viz.: Leagrave (Norton Road) Council school, and Toddington (Chalton) school. Clerk of the County Council, Shire Hall, Bedford.

DUBLIN.—July 25.—For erection of dwellings for the working classes on Fairbrothers' Fields area, Dublin, for the Housing Committee, Corporation of Dublin (subject to sanction of Local Government Board loan). City architect. Total number of houses to be erected can be seen on reference to advertisement on page 16.

HALIFAX.—July 23.—For painting exterior of Stoneyroyd Hospital and outbuildings. Mr. J. Lord, M.I.C.E., borough engineer, Town Hall, Halifax. Deposit £1. Tender to Mr. P. Saunders, town clerk.

INGATESTONE (ESSEX).—July 25.—For demolition and clearing sites of two blocks of cottage tenements known as Brook Cottages, High Street, Ingatestone, for the Chelmsford Rural District Council. Mr. A. S. Duffield, clerk, 96 High Street, Chelmsford.

LONDON.—July 22.—For construction of surface-water drain at Wandsworth Cemetery, Wandsworth, for Borough Council. Mr. P. M. Dodd, M.I.C.E., 215 Balham High Road, S.W. Tenders to Mr. D. A. Nicholl, town clerk, Wandsworth, S.W.

MOWSLEY, LEICESTER.—July 19.—For extensions to sanatorium consisting of pavilion to accommodate ten beds, brick and slate construction, drainage, water supply, and other work therewith. Plans and bills of quantities of Mr. T. McCarthy, architect, Council Chambers, Coalville. Tenders to Mr. W. L. Freer, clerk to County Council, 10 New Street, Leicester.

NEW KYO.—For alteration of premises No. 1 Croft Terrace, New Kyo, suitable for club purposes. Mr. J. J. Walton, architect, 4 Louisa Terrace, Stanley, or Secretary, New Kyo Constitutional Club and Institute, Ltd., New Kyo.

PORTSMOUTH.—July 22.—For colourwashing walls and ceilings and cleaning paintwork of schools during forthcoming summer vacation, for the Portsmouth Education Committee. Mr. G. H. Etherton, clerk, Town Hall, Portsmouth.

ROCHDALE.—July 22.—For painting required at the Rochdale Infirmary. Mr. T. Elvyn Kershaw, F.A.A., secretary.

STOCKPORT.—August 1.—For painting, with two coats of pure white paint, the outside woodwork at Chestergate Clothing Works, Stockport. Messrs. J. Preston & Son, Ltd., Chestergate, Stockport.

TOTTENHAM.—July 20.—For repair of tar and asphalt paving for District Council. Major W. H. Prescott, R.E., surveyor, Town Hall, Tottenham, N. 15. Tender to Mr. R. C. Graves, LL.B., clerk, Town Hall, Tottenham, N.

TENDERS.

NEWCASTLE-UNDER-LYME.

For supply of 150-kw. rotary converter, with high and low tension switchgear, for the Corporation.

BRITISH WESTINGHOUSE ELECTRIC AND MANUFACTURING CO., LTD., Trafford Park (*accepted*)	£2,106 15 0

ROMFORD.

For repairs and painting at Albert Road and Salisbury Road school buildings, for the Romford school managers.

E. G. BRATCHELL, Hornchurch (*accepted*), Albert Road £89 10*s.*, Salisbury Road £14 15*s.*

WALSALL.

For erecting a steel carrier for conveying across the canal the proposed main to the Holly Bank Colliery, for the Electric Supply Committee.

CROSS & CROSS, LTD. (*recommended*)	£168 0 0

WEYMOUTH.

For repairs to cargo stage and driving piles at Custom House Quay, for the Corporation.

J. T. WHETTAM (*accepted*)	£324 9 8

MR. ADAM HUNTER, the permanent engineer of the Forth Bridge, has died at Kirkcaldy.

THE death is announced of Mr. Alfred Andrew Burnett, F.S.I., of the firm of J. J. Burnett & Sons, Southampton.

THE General Congress of Engineers, Paris, has drafted a scheme for the construction of a tunnel under the Straits of Gibraltar.

MR. HUGH CAMERON, R.S.A., died on Monday morning last aged eighty-three. Mr. Cameron, who first exhibited in the year 1854, studied under Robert Scott Lauder.

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Premiums, £3,497,074.

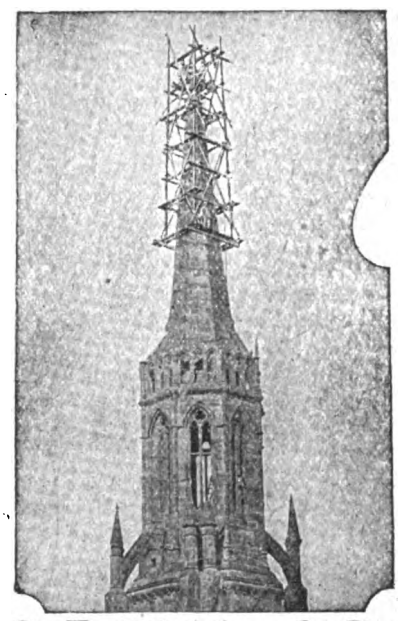
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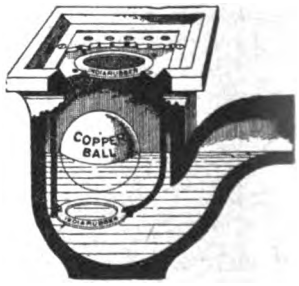
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THE SURVEYORS' INSTITUTION.

MR. ARTHUR NORMAN GARRARD, Fellow, of the firm of Messrs. Daniel Smith, Oakley & Garrard, 4 and 5 Charles Street, St. James's Square, S.W. 1, has been elected Hon. Secretary of the Institution in the place of the late Mr. Percivall Currey. Mr. Garrard was Professional Associate of Council from 1899 to 1904.

THE TAXATION OF WOODLANDS.—SCHEDULE B.

In May last the Council of the Institution approached the Chancellor of the Exchequer, with the object of urging an amendment of the Finance Bill, 1918, for the purpose of relieving woodlands, &c., from assessment to income tax, Schedule B, at double annual value (vide page 513, "Estates Gazette," June 1, 1918).

Their representations proved successful, a proviso being added to Clause 21 of the Bill enabling exemption from the double tax to be obtained on certain conditions in respect of land not occupied for purposes of husbandry.

The following circular to members of the Institution has since been drawn up, and it is desired to draw their attention to the important further concession contained in Mr. G. R. Hamilton's letter of June 29. It will be noted that when lands are already scheduled as woodlands, shrubberies, policies, the assessment will normally be made on that basis, and owners, agents, and others will therefore as a rule be relieved from the necessity of making application for these lands to be assessed at the lower rate:—

"The attention of members is drawn to Section 21 of the Finance Act, 1918, under which, as originally drawn, it was proposed to increase the assessment for income tax, Schedule B (*i.e.*, on the profits of occupation), on all lands to an amount equal to twice their annual value. It was, however, pointed out to the Chancellor of the Exchequer that such an additional burden would fall with special severity on woodlands and other land, such as gardens, shrubberies, &c., bringing in but small return.

"As a result of these representations a proviso was added, during the passage of the Bill through Parliament, to the effect that where it is proved to the satisfaction of the Income Tax Commissioners that any person assessed in respect of the occupation of land is not occupying such land for, or mainly for, purposes of husbandry, he shall continue to be assessed for Schedule B on the annual value only, unless the Board of Agriculture certify that the use of the land for purposes other than husbandry is unreasonable.

"There seemed reason to fear that this proviso might necessitate owners having to make special claims to the Commissioners in respect of all woodlands and other lands coming within the terms of the proviso, thereby throwing a large amount of unnecessary labour upon both agents and the Inland Revenue staff. The Chairman of the Inland Revenue Commissioners was therefore approached with the object of securing that land already scheduled as woodland, &c., and known, therefore, not to be used for purposes of husbandry, should continue to be assessed at the old rate, unless there were some reason to suppose that the Board of Agriculture certificate, if asked for, would be refused."

In reply to this proposal the following letter has been received:—

Board Room, Inland Revenue,
Somerset House: June 29, 1918.

Dear Sir,—In reply to your letter of the 24th instant. I am directed by the Chairman of the Board to say that, in regard to lands which are in fact used for purposes other than husbandry, sufficient information would in most cases be available to render it unnecessary for the taxpayer to make any application to the Income Tax Commissioners with a view to assessment to income tax, Schedule B, on the single annual value. The assessment, in such circumstances, would normally be made on that basis without any application.

Notice of assessment will be issued in all cases, so that, if in any instance a difference of opinion should arise, the taxpayer will have an opportunity, whether or no he has made any prior application, to raise the matter by way of appeal.—Yours faithfully,

G. R. HAMILTON.

A. Goddard, Esq.

Messrs. Geo. Corderoy, J. W. Hurrell, and Wm. Woodward have recently given evidence before the Building Material Supply Committee.

Mr. J. H. Oakley, President, with Messrs. Thos. Binnie, A. L. Ryde, Edwin Savill, and J. D. Wallis, have given evidence before the Acquisition of Land Committee of the Ministry of Reconstruction on behalf of the Institution.

THE late Mr. Abraham Sharp, architect, Bradford, left £13,286.

AN offer of land for erection of small houses is being considered by the Burnham Council (Somerset).

THE Newport Town Council have decided to instal plant at a cost of £2,200 to deal with waste material at their refuse destructor.

THE British Industries Fair to be held in Glasgow is to be open on August 19 in the new building specially erected for that purpose at Bunhouse.

ADJUTANT and Acting Captain J. H. Burrell, only son of Mr. Burrell, architect, Durham, is reported a prisoner of war.

WORKERS, including boys and girls, in the West Midland firebrick industry have been granted by the Committee on Production an advance in wages, dependent upon abnormal conditions.

MUSSELBURGH Town Council have remitted the letter from the Local Government Board as to provision of working-class houses to the Public Health Committee for consideration.

COLONEL E. M. BRUCE VAUGHAN has brought a scheme for the raising of £35,000 before the Board of Management of the King Edward VII. Hospital, Cardiff, for further extensions.

A TABLET designed by Messrs. Halsey Ricardo and Laurence Turner has been placed in Chelsea Old Church, Cheyne Walk, to the memory of Mr. William F. De Morgan, who died in January 1917.

THE old Wesleyan church at Kempstone, Dorset, has unfortunately been destroyed by fire. It is generally believed that the building was unique, being the only place of worship left in the kingdom with a thatched roof.

MR. J. DATTO, the assistant surveyor, has been appointed temporary surveyor to the Felixstowe Urban District Council during the absence of Mr. H. Clegg, the surveyor, on military service.

MESSRS. THOMAS SMITH & SONS, Steam and Electric Crane Works, Rodley, near Leeds, have converted their business into a (private) limited company. No alteration will be made in the management.

MR. MAURICE B. ADAMS, F.R.I.B.A., has been elected chairman of the Chiswick Parochial Charities Trustees. This year's Royal Academy contains the design by Mr. Adams of the new almshouses to be erected by the trustees.

THE proposal of the Derby Town Council to prepare a town-planning scheme embracing the erection of 5,208 houses outside and 2,031 inside the borough was opposed by the neighbouring authorities at the Local Government Board inquiry held on Friday last.

PERMITS for the release of cement will be issued by the Director of Army Priority (D.A.P.3.C.), Caxton House, Tothill Street, S.W. 1. Applications for permits should be made by the firm or persons requiring to use the cement and not by the manufacturer or merchant. The quantity required, the purpose for which it is required, and the name and address of supplier must in every case be stated.

LIEUTENANT W. V. LAWTON, R.E., died last week from the result of an accident through his horse falling with him. He was twenty-six years of age, and had been in France since 1915. Lieutenant Lawton was a fellow of the Surveyors' Institute and an A.R.I.B.A., and was to have joined his uncle in partnership at the close of the war, Mr. Henry Perkin, F.R.I.B.A., of the firm of Perkin & Bulmer, architects, Leeds.

NEWS is to hand of the death of Lieutenant Edward Charles Sutton Monson, M.C., of the Royal Horse and Field Artillery, from wounds received in action on the French Front. Lieutenant Monson was the elder son of Major E. C. P. Monson, F.R.I.B.A., of Fremington, Acton, Middlesex.

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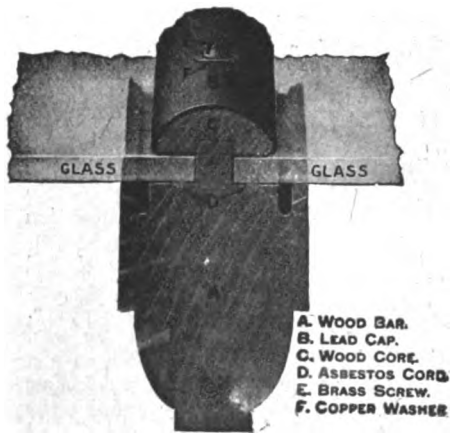
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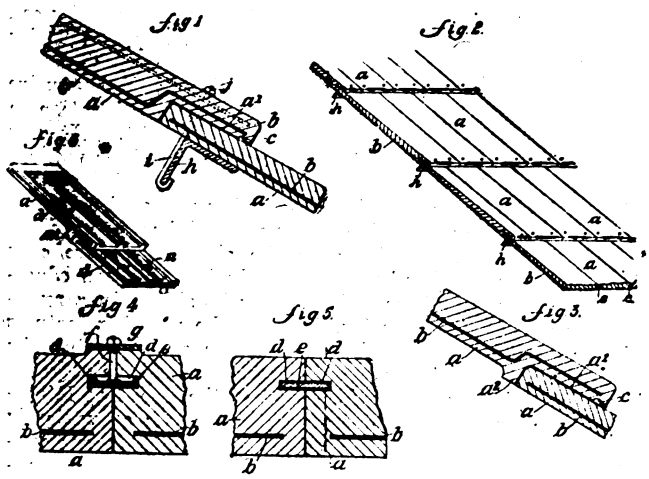
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BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 115,581 (Oct. 18, 1917).—Improved roofing slab.—Thomas Furniss, 44 Ashbrow Road, Sheepridge, Huddersfield, York, roofing engineer.—This invention has reference to roofing slabs, and has for its object the production of a reinforced concrete indurated slab of improved composition and construction, which shall be proof against the action of fire or water, resistant to acid fumes, and adapted to be used in roof structures. Fig. 1 is a longitudinal section showing portions of two such roofing slabs. Fig. 2 is a perspective view of a portion of a roof constructed with the improved slabs. Fig. 3 is a similar section to fig. 1, showing a slight modification in construction. Figs. 4 and 5 are transverse sections of portions of adjacent slabs, showing the joints between same; and fig. 6 is a view showing a further modified construction of slab. The slabs are made of a mixture of six parts by weight of crushed granite passed through a sieve of suitable mesh—for instance, a ⅜-inch sieve—and two parts by weight of Portland cement mixed with water, each quart of water used having added thereto a mixture of two ounces of magnesium chloride and two ounces of alum, to set the concrete. The mixture is moulded into slabs (*a*) of the size and shape desired, a metal reinforcement (*b*), which may comprise lattice metal of suitable mesh, being laid in the concrete slab in moulding so as to occupy a position slightly below the longitudinal centre of the slab, terminating at each end and side short of the ends and sides of the slab to avoid any exposure of the metal. Each slab is made slightly taper longitudinally on the upper side so as to be of less depth or thickness at one end than the other, the thicker end of the slab having an ordinary undercut rabbet or recess a^1 formed to receive the thinner end of the next lower slab in laying them in position to form the roof. The recess a^1 is provided with a lateral weather groove or throating *c* to prevent the entry of moisture between the laid slabs by capillary attraction. The slabs are also recessed along nearly the whole of each longitudinal side or edge as shown at *d* in figs. 4, 5, and 6, to receive a weather bar *e* of metal, which is inserted in the opposing recesses of adjacent slabs when laying them in position, the said bars stopping short of the ends of the slabs so that the metal is not exposed to the atmosphere. The metal bar *e* may either be channelled as shown at fig. 4, to collect and run off moisture in the event of shrinkage of the slabs, or made plain, as shown in fig. 5. In fig. 4 the bar *e* is secured by screwed spindles *f* to an asbestos cap *g*, fitted over a raised rib on the edge of each adjacent slab. In fig. 5 the joint between the adjacent slabs is grouted with suitable liquid Portland or like cement, the water used in making such cement being diluted with a weak solution of copperas. In fig. 3 they can be made slightly tapered on the upper side as in fig. 1, the slab being thickened at the rear of the undercut recess a^1 to provide a shoulder a^2, against which the next lower slab is adapted to abut. The slabs are laid to form the roof in fig. 2, each slab being secured at intervals to purlins *h* by a hook-ended bolt *i* passing through the slab and secured thereto by nut *j*, as shown in fig. 1. After the slabs have been moulded, and previous to being used, they are first immersed in a solution of silicate of soda, and allowed to stand therein for fourteen days to ensure thorough induration, the hardness increasing as the slabs mature under natural conditions, as when applied to form the roof. In fig. 6 the slabs are panelled in order to secure lightness where this is desirable. The slabs are dense and hard, provide overlapping weatherproof joints, will sustain considerable weight, are not liable to crack, and will resist concussion and the action of acid fumes.—June 12, 1918.



PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 112,270 (Dec. 18, 1917. Dated under International Convention, Dec. 18, 1916).—Jacques Marzoli, Aigle, Vaud, Switzerland.—Mould capable of being taken to pieces for forming arched or folded filler blocks of reinforced concrete.

116,346 (June 7, 1917).—John Woolcock, 42 Albemarle Street, W. 1.—Construction of floors and the like.

116,367 (June 14, 1917).—W. W. Wiltshire, Rosebank, Park View Road, Alphington, Victoria.—Domestic fire attachments for heating air.

116,373 (June 20, 1917).—Thomas Lavender and J. R. Pannell, "Ye Hollies," Staines Road, Twickenham.—Portable electrical dryer for local drying of drawings and the like.

116,374 (June 20, 1917).—J. F. Wake, Polam Grange, Darlington.—Apparatus for dividing girders, channels, and similar sections in steel and iron.

116,399 (July 26, 1917).—Holophane Glass Co., 340 Madison Avenue, New York.—Prismatic glassware for illuminating purposes.

116,429 (Sept. 25, 1917).—Walter Barnett Bilton, Rugby, Warwickshire, and James Florendine, 16 Bridget Street, New Bilton, Rugby.—Road sweeping machines.

116,431 (Sept. 25, 1917).—W. W. Farnsworth, Rosemont Ranch, Littleton, Arapahoe, Colorado, U.S.A.—Renovators or vacuum cleaners.

116,459 (Nov. 26, 1917).—The Pioneer Manufacturing Co., Water Street and Concrete Avenue, Waterloo, Blackhawk, Iowa.—Apparatus for forming concrete sewer pipes.

116,470 (Jan. 16, 1918).—Arthur Roberts, 27 Leyfield Road, West Derby, Liverpool.—Water heaters or boilers.

116,474 (Jan. 30, 1918).—F. W. Plane, 38 Chelsea Gardens, S.W.—Receptacles for varnish, paint, and the like.

Any of the above specifications may be obtained from J. D. Roots.

THE heritors of Dumbarton met last week—Councillor Robert MacFarlane presiding—to further consider an offer by Messrs. A. M'Millan & Co., Ltd., shipbuilders, to acquire the parish church and churchyard. Messrs. M'Millan offer to build a new church with an accommodation equal to the present church. The designs will be prepared by them to the reasonable approval of the heritors, and the new church will be erected on a site also approved by the heritors. The meeting approved generally of these proposals, and remitted it to their committee to continue the negotiations and prepare and adjust a draft provisional agreement.

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VARIETIES.

MR. CHARLES BATEMAN LUNN, architect and surveyor, of Cleeve Prior, Worcester, left £7,559.

MR. R. H. J. MAYHEW, district surveyor of East Hackney, has become interim district surveyor for West Bethnal Green.

MR. NEAVE, the assistant surveyor at Walthamstow, has received the appointment as surveyor to the Aldershot Urban Council.

THE dry dock to be constructed at Courteney Bay, St. John, New Brunswick, will be the largest in America; length 1,150 feet, width 125 feet.

THE death is announced of Corporal Alan George Wheeler, Bedford Regiment, son of Mr. W. T. Wheeler, builder, of East Bergholt.

MR. JAMES A. SWAN, F.R.I.B.A., has removed from Newhall Street to Daimler House, Paradise Street, Birmingham.

THE Huddersfield Education Committee have under consideration the proposal of the governors of Almondbury Grammar School to extend the school buildings.

OWING to the demand for further accommodation at the Wilkinson Sanatorium, Bolton, the trustees have decided to take steps to make provision for soldiers requiring treatment by the erection as soon as possible of an additional ward block.

THE Marsden Urban District Council have decided in favour of a scheme for the erection of additional buildings at the Huddersfield War Hospital to be called the "Colne Valley Ward." The scheme is estimated to cost £2,500.

KINGHORN Town Council have appointed a committee to inquire into the question of providing workmen's housing, the question being urgent owing to the opening of new works in that district.

THE men working in the building trades in Liverpool, Birkenhead, and Wirral districts have given seven days' notice, expiring on Monday next, to all trades in the building industries unless the Government decide to pay the 1s. 6d. per hour awarded by the Conciliation Board.

THE Building Trades' Employment Exchange is to be transferred from Aldwych to Tavistock Street, Covent Garden, W.C. There are to be refreshment rooms, reading rooms, and tool store for use of workmen calling at the Exchange in search of employment. When completed the Exchange is to be the clearing exchange for the building trades in the Metropolitan area.

THE Cannock Rural District Council have decided that the surveyor should make inquiries as to suitable building sites in the district for houses for the working classes, and prepare plans. Owing to the urgent need for workmen's houses at Penkridge and Brewood it was resolved that the Parish Councils of the parishes mentioned be requested to consider the question and submit plans.

ON Saturday evening the principal part of the Marine Pier at Ramsgate was destroyed by fire, caused, it is surmised, by the end of a lighted cigarette. The buildings at the foot of the pier were saved by cutting the space between the remaining woodwork and the fire, but the remaining buildings, which included the Concert Hall, tea rooms, café, &c., were destroyed.

MR. LAURENCE WEAVER, Director of Supplies, Food Production Department, has received the handsome gift of a sum of £10,000, with the promise of £1,000 per annum for five years from Sir Robert McAlpine for the foundation trust fund of a proposed Institute of Agricultural Botany to be established at Cambridge.

THE Halifax Town Council have approved the purchase by the Finance Committee of property near the Town Hall comprising the Union of London and Smiths Bank, shops, &c., from Mr. Ralph E. Bray, of Knaresborough, for £10,700. It is intended to convert the premises into offices for the Corporation staff owing to the shortage of the existing accommodation at the Town Hall.

MR. LLOYD GEORGE has been the means of obtaining a generous gift of whatever sum may be necessary up to £20,000 for the establishment of a home for neurasthenics, and another home for parapletics, among Welsh soldiers. Sir R. J. Thomas has also placed at the disposal of the Ministry of Pensions, through Mr. W. Lewis, Superintending Inspector for North Wales, a fully-equipped convalescent home for men at Holyhead.

THE Stoke-on-Trent Corporation have deferred consideration of the recommendation of the Electricity Supply Committee pending a report by Sir John Snell, the electrical expert, that the generating plant in the central power-house be extended by the provision of a 5,000-k.w. turbo-generator and necessary boilers, &c., at an estimated cost of £100,000, with £10,000 for contingencies, and that an extra high-tension main be laid from the central power-house to Liverpool Road, Stoke, at an estimated cost of £2,400.

GEORGE HUTCHISON, of the K.O.S.B., only son of Mr. R. Gemmell Hutchison, R.S.A., the well-known artist, who was killed on June 28, was educated at the Edinburgh Institution and Art College, Edinburgh, and was one of the most promising of the younger artists of the city. He had specialised in animal painting, and examples of his work have been shown at the Royal Academy and the Royal Scottish Academy exhibitions and elsewhere. He was twenty-two years of age, and was wounded in October 1917, and gassed on June 13 last.

A LETTER was read at the Cardiff Parks Committee meeting last week from the Ministry of Pensions stating that they desired to provide accommodation for the treatment of discharged and disabled men, suggesting that the Howard Gardens was a suitable site on which to erect temporary buildings, with accommodation for 150 in-patients, and asking that it be placed at their disposal. The buildings would be administered by the committee of the King Edward VII. Hospital. It was decided to accede to the request.

AN important series of lectures is announced by the Industrial Reconstruction Council for the autumn and winter. The first of these will be given by the President of the Board of Trade on Wednesday, October 2, Mr. G. N. Barnes, M.P., occupying the chair. Other lectures will follow at fortnightly intervals, the second being delivered by the Minister of Reconstruction under the chairmanship of the Lord Mayor. Mr. W. L. Hichens, Sir Arthur Steel-Maitland, Bart., M.P., Mr. Ernest J. P. Benn, and Sir William S. McCormick will carry the series up to Christmas, the chair being occupied by Sir Wilfrid Stokes, Lord Burnham, Mr. J. H. Whitley, M.P., and the Marquess of Salisbury. The lectures will be held at the Saddlers' Hall, Cheapside, at 4.30 P.M. A full prospectus of the series can be obtained from the Secretary, I.R.C., 2 and 4 Tudor Street, E.C. 4.

SIR HENRY LOPES presided at a meeting of the Executive Committee for the Furtherance of University Education in the South-west at Exeter on Thursday, July 11. It was reported that already over 1,400 signatures had been received to the memorial to be addressed to the President of the Board of Education, and a considerable number was still expected. The result of the circulation of the memorial was considered very satisfactory, especially as the signatures were only from public and other bodies definitely interested in educational welfare, and from individuals who signed in a representative or official capacity. One of the pleasing features of the movement was the enthusiastic support given by organised labour. The memorial had already been endorsed by 150 such bodies. The President of the Board of Education is to be asked to receive a deputation at a conveniently early date for the reception of the memorial. A sub-committee was appointed to consider the question of the instruction of convalescent and discharged officers in forestry and other subjects.

A PARTY representing the East Riding Antiquarian Society paid a visit to Burton Agnes Hall on Monday last, and spent a delightful afternoon in the fine Elizabethan mansion which is the home of the Boynton family. Mr. Thomas Sheppard, M.Sc., of Hull, acted as guide. Burton Agnes Hall was built in 1601 by Sir Henry Griffith, and Inigo Jones designed some of the interior decorations. Its transcending interior features are the alabaster mantelpiece and the famous Hall screen, upon which are sculptured panels representing the Sibyls, the Virtues, the Twelve Tribes, and the Four Apostles. The great chimneypiece bears the arms of Sir Thomas Boynton, which crown a mass of elaborately sculptured representations of the Five Senses and the Wise and Foolish Virgins. The oak panelling in the dining-room has been decorated with gold and colour by artists of the Jacobean days, and while archæologists may wince at the colour which has been put upon the draperies of the carved figures, they must confess that the artists who have relieved the sombre panels with touches of gold are not to be classed with the vandals who had a habit of covering the oak in similar places—notably the Wilberforce House at Hull—with coats of paint or whitewash. Over the fireplace is a large representation of "The Dance of Death," carved out of a single piece of oak, with creepy realism. The group containing Sir Griffith and Lady Boynton is painted by Cotes, one of the founders of the Royal Academy. West of the Hall is a vaulted chamber of the twelfth century, said to be the earliest remains of domestic architecture in the Riding.

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THE
Architect and Contract Reporter.
FRIDAY, JULY 26, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than* 2 P.M. *on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 1, after that date on payment of 4d.

COMPETITIONS OPEN.

SAO PAULO (BRAZIL).—Sept. 7.—H.M. Consul at Sao Paulo has forwarded a supply of plans and instructions (in English) in connection with an international competition of plans and designs for the construction of a national monument for the purpose of "perpetuating the date of the proclamation of the independence of Brazil and to render homage to the principal historical figures who took part in this momentous occasion." The monument is to be erected on the site of the Ypiranga hill, in the State of Sao Paulo. Granite and bronze are to be the chief materials employed in this work, the total cost of which is not to exceed 1,000 contos of reis (1,000,000 milreis) currency. Department of Commercial Intelligence, 73 Basinghall Street, E.C. 2.

CONTRACTS OPEN.

CARSHALTON.—Aug. 3.—For cleaning and repairs at Queen Mary's Hospital, for the Metropolitan Asylums Board. Deposit £1. Mr. T. Duncombe Mann, Office of the Board, Embankment, E.C.

CHELSEA.—Aug. 3.—For cleaning and distempering work at St. George's Home, for the Metropolitan Asylums Board. Deposit £1. Mr. T. Duncombe Mann, Office of the Board, Embankment, E.C.

DARTFORD.—July 27.—For repairs and redecoration of offices, 37 West Hill, Dartford, for the Dartford Board of Guardians. Mr. E. J. Hobbs, clerk, West Hill, Dartford.

DUNSTABLE.—Aug. 13.—For facing portion of filter walls at sewage farm, Chalk Hill, near Dunstable, with Staffordshire bricks, for the Corporation. Mr. W. F. Wilkins, borough surveyor, Dunstable.

LINTHWAITE (YORKS.).—July 31.—For mason's work required in erection of a fence wall, &c., in connection with widening of Hoylehouse Corner, for Linthwaite Urban District Council. Mr. D. J. Bailey, clerk, Yorkshire Bank Chambers, Huddersfield.

LLANDYGWYDD (CARDIGAN).—Aug. 2.—For painting at Llandygwydd N.P. school, for the Cardigan County Education Committee. Rev. J. Williams, District Education Office, Cardigan.

NEWARK.—For erection (Newark district) of corrugated-iron building, 210 feet long, 46 feet span, 36 feet to apex. Messrs. G. Sands & Sons, Ltd., Colwick, Notts.

PLYMOUTH.—July 29.—For construction and supply of a counter in the general office, borough treasurer's department, Old Guildhall, Whimple Street, for the Corporation. Mr. J. Paton, borough engineer, Plymouth.

STOCKPORT.—August 1.—For painting, with two coats of pure white paint, the outside woodwork at Chestergate Clothing Works, Stockport. Messrs. J. Preston & Son, Ltd., Chestergate, Stockport.

TENDERS.

BELFAST.

For high-tension cables for the Belfast Corporation.
CALLENDER'S CABLE AND CONSTRUCTION CO.
(*accepted*) £15,621 15 0

BEXLEY.

For installation of storage battery at Bexley Mental Hospital, for the London County Council.
CHLORIDE ELECTRICAL STORAGE CO., LTD., Manchester (*accepted*) £1,700 0 0

HOUNSLOW.

For fitting combustion chambers to boilers at the refuse destructor, for the Heston and Isleworth Urban District Council.
H. WINDSOR & CO., LTD. (*recommended*) . £234 10 0

LONDON.

For painting and decorating Central Finsbury Radical Club.
J. C. MATHER, 38 Northampton Street, Islington, N. 1. (*accepted*) £164 0 0

PURDYSBURN.

For painting exterior of pavilions 5 and 6, and diphtheria pavilion at Purdysburn Fever Hospital.
ALEX. THOMPSON (*accepted*) £110 0 0

WEST HAM.

For painting exterior of South Hallsville School, for the Education Committee.
CHAPMAN & STURTON (*accepted*) . . . £220 0 0

THE Housing of the Working Classes Committee of the London County Council recommend spending £3,500,000 to meet the deficiency in housing and to clear slum areas. The estimated expenditure of £3,500,000 should be spread over the period of seven years at the rate of about £500,000 a year.

LIEUTENANT-COLONEL A. E. COPWELL, of the Hants F.A., after twenty-eight years' active service as a Volunteer and Territorial, including eighteen months' foreign service with the Wessex Brigade on the N.-W. frontier, India, has been compelled to retire through ill-health. He has, therefore, resumed his work as an architect and surveyor at Portsmouth.

AT the last meeting of the Wellington (Salop) Urban District Council plans of workmen's houses which it is proposed to erect in the Watling Street neighbourhood were approved, and are to be submitted for the approval of the Local Government Board, together with an application for sanction to borrow £17,150 for the carrying out of the scheme at the end of the war. There are to be thirty-eight three-bedroom houses at a rental of 6*s.* each per week, and twelve with more first-floor accommodation at 7*s.* per week, assuming that the scheme can be worked at the estimated cost. If this cannot be done the rents will be proportionately higher. The Council have in view the possibility of future tenants gradually purchasing their own houses.

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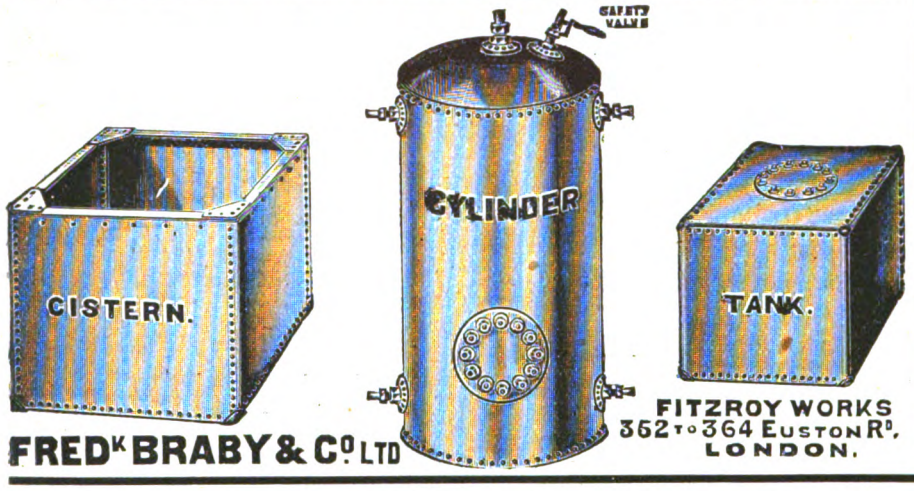
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LONDON ASSOCIATION OF MASTER DECORATORS.

A MEETING of the General Council of the Association was held on Thursday, July 4, at the offices of the Secretary, when there were present:—Messrs. W. Stewart-Greene, John Anderson, T. S. Rowden, J. Milton, H. G. White, F. De Jong, C. L. Robertson, Edwin Lott, Charles H. Bessant, T. W. Willson, C. E. Wilkinson, and A. Davidson (Secretary).

Mr. Stewart-Greene occupied the chair.

The Secretary read the minutes of the last Council meeting and the contents of same were noted. A letter was also read from the National Federation of Building Trade Operatives dated June 29, making an application for an advance in wages of tenpence per hour on pre-war rates, such advance to include general increases granted during the war with the exception of the 12½ per cent. bonus. Also for an increase to 3*s*. 6*d*. per day of the country allowance or a minimum of 24*s*. 6*d*. per week for four days or more. The Secretary reported in connection therewith that he had had an interview with the London Secretary of the National Federation of Building Trade Operatives and submitted that this Association should be one of the parties to the reference which he understood had been made to the Ministry of Labour, and he produced a letter which he had written to the said Operatives' Association in support of his contention, together with a reply received thereto, in which the Operatives' Federation stated that they had made application to the Ministry of Labour to include this Association in the reference. The action of the Secretary was confirmed and approved, and he was authorised to make formal application to the Ministry of Labour to be made parties to the reference in further support of the steps which he had taken with the Operatives' Federation.

It was resolved that Messrs. Stewart-Greene, John Anderson, and A. Davidson be appointed to represent the Association at the reference.

The question of the reconstitution of the National Association was discussed at considerable length and as it was recognised that the proposals involved in the reconstitution had a very important bearing on this Association, it was resolved to form a committee to consider the whole question and the following gentlemen were appointed to act upon same:—Messrs. John Anderson, C. L. Robertson, C. E. Wilkinson, C. E. Campbell, A. S. Jennings.

The apprenticeship question was also further discussed, and in view of the pending visit of the Joint Council to the Brixton School further consideration was deferred to the next meeting.

RECONSTRUCTION IN INDUSTRY.

THE formation of Joint Industrial Councils on the lines of the Whitley Report is steadily progressing. Councils in the pottery and building industries are already at work, and during the present month the following newly-formed Councils will hold their first meetings:—The heavy chemical trade; gold, silver, and allied trades; the rubber industry; match manufacture; the silk industry.

The dates of the meetings have been fixed in the case of the Rubber Council, which took place on July 16, Gold, Silver, and Allied Trades Council on July 20, the Matches Industrial Council on July 30, and the Silk Industrial Council, on July 25 or 30.

In the following industries provisional committees have already drafted constitutions of proposed industrial councils which have been sent out to the various associations concerned for their approval:—Baking, cable making, commercial road transport, electrical contracting, furniture making, leather goods and belting, vehicle building.

A constitution for the printing industry has been drafted, and will shortly be sent out for approval to the associations concerned. When these constitutions have been approved the first meetings of the newly-formed councils will be arranged with as little delay as possible. In the following industries preliminary conferences as to the formation of industrial councils have taken place, and proposals to proceed with the drafting of constitutions have been approved:—Bobbin manufacture, boot and shoe manufacture, electricity power and supply, roller engraving, woollen and worsted industry.

In some twenty other industries the question of the formation of joint industrial councils is being given careful consideration, and in a number of cases proposals to summon joint conferences of employers' association representatives and trade union representatives have been approved.

There are many of the nation's industries, of course, in which the organisation on the side either of the employers or of the workers is not sufficiently representative as yet to admit of the formation of joint industrial councils at once. In these industries the "Whitley idea" is being carried out by the formation of temporary bodies, which are termed interim industrial reconstruction committees. They will deal with the many urgent problems attached to the re-establishment of their representative industries on a peace basis, and in addition will improve the organisation of their trades where it is at present unrepresentative. Later it is hoped they will be in a position to pass from their temporary nature and become full joint industrial councils. Towards the formation of these temporary bodies the Ministry of Reconstruction has already made considerable progress, and committees have already been established in some twenty trades and industries. Fuller details of progress in this matter will be available shortly.

THE SHORTAGE OF CEMENT.

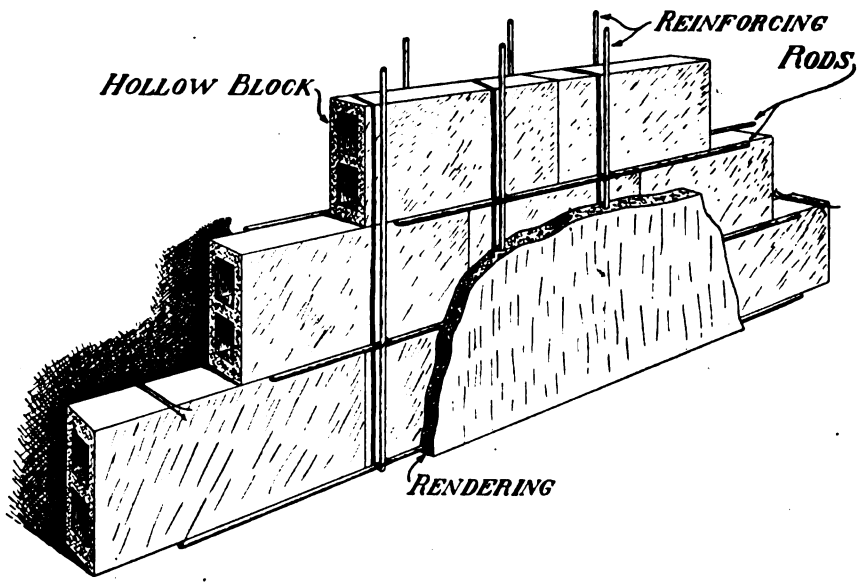
THE "Irish Builder" says that considerable loss and inconvenience is being experienced by Dublin builders and others within the past week or ten days owing to the scarcity of cement. The stocks held by the different builders and merchants are certainly small, and there is practically none coming in to the port of Dublin. The merchants who have any stocks are not anxious to part with it, and further hardship is added on the consumer by exorbitant prices being demanded in a good many cases.

The present controlled price, or rather the price arranged by the Associated Cement Manufacturers, London, is 112*s*. 6*d*. per ton, and instances have occurred recently in the city where from 10 per cent. to 25 per cent. over and above this price has been asked by the merchants. The former price of cement for years was under 40*s*. per ton on the average.

The causes are various, but are principally due to the scarcity of labour in the English manufacturing districts, where women are now employed in several departments of the cement trade. There has been a large amount of cement sent to France; it is now used in the building of concrete ships, and the scarcity of vessels available to bring cement here adds considerably to the cause of the shortage. Empty bags should also appear to increase the trouble, as the raw material to manufacture the bags cannot be got, and merchants and builders who are careless in returning empty sacks to the manufacturers should do so in their own interests.

Since writing the foregoing, we have made inquiries and found there is practically no cement to be had in the city. A representative of one firm of builders' providers waited recently on the military officer having to do with the aerodromes now being built near Dublin, and was informed by him that cement was getting very scarce in England, and that there was hardly enough to fill Government requirements. A small consignment of 400 tons came into Dublin on the 15th, but this is commandeered for use at the Irish aerodromes and will not be allowed to be sold to builders for ordinary work. As much as £1 per bag has been asked and paid for cement lately. A builder carrying out a small job in the centre of the city told the writer that he paid 15*s*. each for two bags of cement a few days ago.

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Wombwell.—The Council invite architects practising within thirty miles of Wombwell to submit designs for the laying-out of lands situate in King's Road, Wombwell, and Cemetery Road, Jump and Hemingfield, and for the erection of workmen's dwellings thereon on garden city lines. Particulars, conditions, and plans of the sites can be obtained from Mr. Percy Milnes Walker, solicitor, on payment of £5 5*s*., which will be returned on receipt of a bona-fide design.

CONTRACTS OPEN.

Aylesbury.—Aug. 7.—For erection of nurses' bedroom at Isolation Hospital, Stoke Road, Aylesbury. Mr. W. H. Taylor, borough engineer, Town Hall, Aylesbury.

Cardiff.—Aug. 7.—For painting houses, cottages, and outbuildings at Barry, Sully, Penarth, St.-y-Nyll, Radyr Court Farm, Whitchurch, Llanishen, Leechmere, and Monknash, for the Glamorgan County Council. County Hall, Cardiff.

Carshalton.—Aug. 3.—For cleaning and repairs at Queen Mary's Hospital, for the Metropolitan Asylums Board. Deposit £1. Mr. T. Duncombe Mann, Office of the Board, Embankment, E.C.

Chelsea.—Aug. 3.—For cleaning and distempering work at St. George's Home, for the Metropolitan Asylums Board. Deposit £1. Mr. T. Duncombe Mann, Office of the Board, Embankment, E.C.

Dunstable.—Aug. 13.—For facing portion of filter walls at sewage farm, Chalk Hill, near Dunstable, with Staffordshire bricks, for the Corporation. Mr. W. F. Wilkins, borough surveyor, Dunstable.

Leeds.—Aug. 3.—For extensions of electricity works, Whitehall Road, Leeds, comprising boiler house, switch house and circulating pump house, for the Electricity Department. Mr. G. W. Atkinson, architect, 1 Mark Lane, Leeds.

Llandygwydd (Cardigan).—Aug. 2.—For painting at Llandygwydd N.P. school, for the Cardigan County Education Committee. Rev. J. Williams, District Education Office, Cardigan.

London.—For tarring roofs, &c., of the annexes at Tooting Military Hospital, for the Guardians of Wandsworth Union. Mr. F. J. Curtis, clerk, Union Offices, Wandsworth, S.W. 18.

Manchester.—Aug. 17.—For painting iron and steel work at Hulme Street tunnel, for the Paving, Sewering, and Highways Committee. City Engineer's Office, Town Hall, Manchester. Deposit £1 1*s*.

Manchester.—Aug. 17.—For painting various bridges in the city (two contracts), for the Paving, Sewering, and Highways Committee. City Engineer's Office, Town Hall, Manchester. Deposit £2 2*s*.

TENDERS.

BELFAST.

For erection of switch room at East Bridge Station, for the Electricity Committee of the Corporation.

Courtney & Co. (*accepted*)	£3,619 0 0

BIRMINGHAM.

For external painting of the Summer Hill homes, for the Board of Guardians.

E. Breakspear & Co. (*accepted*)	£86 12 0

ERITH.

For repairs to schools, for the Erith Urban District Council.

Accepted tenders.

D. C. Bower—Crossness, St. Augustine's, and Picardy schools	£134 18 0
H. E. Chandler—All Saints' and Belvedere boys' schools	32 0 0

HEBBURN.

For the erection of factory, for Messrs. Reyrolle, electrical engineers.

E. Nuttall & Co. (*accepted*).

LONDON.

For supplying and fixing new Mason's patent heavy cast-iron and lead treads to the steps at the Brixton underground convenience (male side), for the Lambeth Borough Council.

Safety Tread Syndicate Co., Ltd. (*recommended*)	£41 10 6

SOUTHEND.

For supply of electric welding plant, for the Corporation Light Railways Committee.

Scott Anderson (*accepted*)	£340 0 0

The death has occurred at Irvine of Lieutenant A. S. Hood, R.E., from pneumonia, eldest son of Mr. Jas. S. Hood, One Ash, Broughty Ferry. The deceased officer received his professional training in the Engineer's Office, Dundee Harbour, and prior to joining up was a Civil Engineer in Canada.

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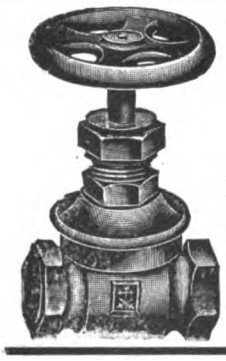
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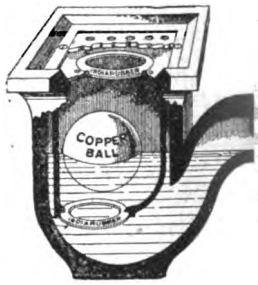
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RECONSTRUCTION IN GERMANY AND AUSTRIA.

(From the "Board of Trade Journal.")

ELECTRIC POWER SUPPLY.

Proposals for the centralisation and development of electric power supply in Germany have received a great deal of attention, and various schemes have been put forward. Reform of the present system has been urged on four grounds:—

1. Economy in coal and its transport.
2. The possibility of using a State monopoly of electricity and of coal as a source of revenue. (This has been opposed on the ground that the industrial necessity for cheap power would not allow the State to make much profit out of such a monopoly.)
3. The importance of plentiful and cheap power in industrial reconstruction, especially in the development of the electro-chemical and electro-metallurgical industries.
4. The necessity of exploiting all the water-power resources of the country.

For some time past the general trend of opinion has been in favour of increased State action. An article by Clemens Heiss in the fourth number of "Schmoller's Jahrbuch" for 1917 refers to the views of some of the principal electrical experts, and a treatise by H. Bueggeln, which appeared in the numbers for July and August, 1917, of "Technik und Wirtschaft," contains further information.

German Advocates of Centralisation.

As early as July, 1916, Dr. J. Klingenberg, in a speech at the War Conference of the Verband Deutscher Elektro-Techniker, urged that the generation of electric current should be nationalised, while leaving the distribution and the retailing of power in the hands of existing undertakings. He suggested that the Prussian Government should erect 25 to 30 large power stations, and inter-connect them by long-distance circuits. He calculated that the total cost would be 900 million marks, but that when the system was in full working order there would be a return of 9.56 per cent., which, after deducting 5 per cent. for interest on invested capital, would leave a clear profit of 41 million marks per annum to the State. He opposed the distribution of current by the State on the grounds that that part of the electricity business, especially the extension of clientèle, required an adaptability to varying conditions which would be more likely to be found in the existing non-State bodies than in a Government Department. He also contended that the State would be expected to extend uniform treatment to all users of current, whereas the best business interests required that there should be some scope for discrimination in rates. By confining its action to the generation of electricity the State would interfere as little as possible with existing rights, and it would create a desirable intermediary between itself and individual consumers.

Another expert, Dr. Voigt, also advocates centralisation. He, however, has been in favour of a short distance scheme in place of Klingenberg's long-distance one, and he believes that electricity works would not be able to enter into sufficiently favourable rate agreements with large consumers unless they produced electricity. He thinks, therefore, that the existing large works should be extended and inter-connected, and that the desired centralisation should be reached by gradual development.

Bueggeln believes that in spite of the usually unwieldy methods of State administration, a form could be created which could hold its own when compared with private concerns. He urges that, in the case of plans for new installations, low working expenses and economy and security should be the first consideration, and, if they can best be attained by a costly installation, such an installation should be preferred to a plant involving smaller capital but higher working expenses. He considers that power stations should be linked up, but believes that turbo-generators of 15,000 to 20,000 kilowatts are the most economical, and that there is no advantage in having larger units.

There has also been a considerable amount of discussion regarding the question of a State monopoly of coal and electricity for revenue purposes.

The Defence of State Monopoly.

Professor Ballod, in one of a series of articles on "Finance after the War," which appeared in the "Europaische Staats und Wirtschafts Zeitung" in the autumn of 1917, says that he is in favour of a State monopoly on grounds of fuel economy as well as on financial grounds. He thinks that all the railways and all industrial and agricultural plant should be electrified, and that electricity should be produced in large plants of 100,000 kilowatts and distributed in high tension mains of 100,000 volts. He calculates that by electrifying the railways it would be possible to save at least one-third of the coal consumed by them, which amounted to about 20 million tons in the year immediately before the war. He urges that the State should endeavour to reduce home consumption of coal by one-third, and should reckon to make most of its profit on coal for export. The cost of coal should not be increased to home industries, nor should the State attempt to make much profit out of electricity, as its aim should be to provide cheaper not dearer motive power. In an article in the "Deutsche Juristen Zeitung" for March 1, 1918, on "Government monopolies after the war," Professor Liefmann, of Freiburg, points out that owing to the difficulties which would arise regarding the indemnification of existing works, and the necessary arrangements with regard to the numerous schemes already taken up by the individual States, an Imperial electricity monopoly could not be expected to provide a large revenue immediately after the war. He considers, however, that the existing chaos in the supply of electricity will only be reduced to order by an Imperial monopoly, and that the scheme should be carried through from the point of view of national economy, if not for financial reasons. Von Dewitz, in a treatise published in the "Preussisches Verwaltungsblatt" for October 14, 1916, urged the taxation of coal, or of its chief products, gas and electricity.

Attitude of the Treasury.

At a sitting of the Reichstag Committee on March 12, 1917, to consider the Imperial Coal Tax Bill, the State Secretary of the Treasury, however, deprecated the idea of a monopoly of coal production and of the coal trade, on account of the difficulties of organisation involved in the scheme.

SCHEMES IN THE VARIOUS STATES.

Local jealousy has up to the present prevented any Imperial action, but progress has been made in most of the individual States.

Wurttemburg.

Bueggeln gives some interesting information about the existing state of affairs in Wurttemburg. He says that in addition to the important works of the city of Stuttgart, and those of the Neckar A.G. at Esslingen, there are about 270 very small and medium-sized works, of which 260 produce their own current; of these only 58 work without water power. The total capacity of all the plants is only 100,000 kw., and with this in 1914 not more than about 1,600 kw. hours were produced. When water was employed to generate current the great bulk of it flowed away unused, owing to the lack of a coupling circuit for the whole country into which the power stations could direct their surplus energy. The line which Wurttemburg is taking was indicated in the "Vossische Zeitung" for December 13, 1917, which stated that the Wurttemburg Central Office for Industry and Commerce was arranging a scheme for the consolidation of all the electricity works for the purpose of the uniform distribution of current. The State is to participate in the administration of the scheme, but the idea of constituting a monopoly of the industry has been rejected.

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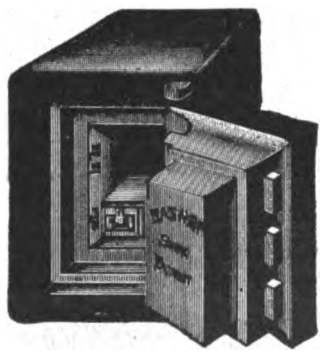
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Saxony.

In Saxony the Elektro Verband (the federation of the municipally-owned electricity works) prepared a scheme for the joint supply of electricity to its members and for the erection of two great power stations, but the State decided that the proposed rates still further increased the favoured position of large cities, and they decided to take over the scheme and carry it out in all its essentials under State control. The State is going to acquire the Hirschfelde Works from a branch of the Allgemeine Elektricitäts Gesellschaft for five million marks, and is then going to erect a second power station near Regis. A directorate of State electricity works is to form a part of the Ministry of Finance, and attached to it there is to be a national Electrical Council, on which representatives of large consumers and technical experts are to sit. On December 6, 1917, the Saxon Second Chamber voted 40 million marks for developing State electricity works on condition that light and power should be furnished at cheap rates for industrial and commercial use.

Bavaria.

An account was given in the "Board of Trade Journal" for March 11, 1918, of the position in Bavaria, and of a scheme for the development of Bavarian water power. The "Münchner Neueste Nachrichten" for December 3, 1917, states that the output of energy is estimated at 21½ million kilowatt hours. The concessionaires are the Allgemeine Electricitäts-Gesellschaft, of Berlin. The work will be begun three months after the conclusion of peace, and it will probably take from four to five years to complete. A syndicate has also been formed to exploit the water power of the Lower Inn. The "Münchner Neueste Nachrichten" for April 28, 1918, says that the syndicate has been called into existence by the Deutsche Bank. The available power is estimated at 200,000 h.p., and the syndicate will undertake the necessary preliminary work. The option of the concession has been given to the Bavarian Nitrate Works. The Deutsche Bank has secured the participation of native Bavarian financial and industrial interests, and the technical direction of the syndicate will be undertaken by the Nitrate Works, which have already established in Munich a Research and Hydraulics Bureau for the Inn Water-power Syndicate. Investigations will be made and plans prepared regarding the best method of establishing plant to exploit the water-power. The syndicate has two million marks at its disposal for this preliminary work. It will not be possible to begin practical operations or to determine the amount of capital ultimately required, and the precise form of the Company, until the plans have been approved by the State. The Deutsche Bank consider that about 150 million marks will be necessary.

Prussia.

In Prussia the Government policy was foreshadowed in February, 1917, when the Minister of Public Works, Dr. von. Breitenbach, in a speech in the House of Deputies, declared himself in favour of the principle of State control of electricity. He pointed out that the broad supply belt which stretches from the North Sea to the Main was already under State control, and that the Government had succeeded in supplying cheap electricity without injuring the interests of provinces, communes, or cities. He said that if the State intervened and created large power stations at places where transport requirements were reduced to a minimum it would be able to supply current so cheaply that third parties would often find it profitable to turn their works into distributing centres, and, while distributing current cheaply to their customers, they would still be able to make a good profit. The Government's policy was defined further by Dr. von Breitenbach in a speech in the Prussian Abgeordnetenhaus on November 16, 1917, in connection with the Hanover Steam Power Works Bill. The Bill authorises the Government to appropriate 13 million marks for the erection of a State power station driven by steam near Hanover.

When he introduced the Bill Dr. von Breitenbach said that the new works would be situated between the supply areas of the Dörwerden-on-the-Weser Works on the north and the Upper Weser Power Works on the south. They would supplement the existing stations, and would also supply an area of their own. They would be begun after the war, and would be in operation at the latest two and a-half years after the declaration of peace. When the works were in operation there would be a complete State area of electricity supply from Bremen to the Main, with all the economic advantages of inter-connection and uniform pressure. He hoped that the control of competition within this area would act as an example. The generation of current would amount to 50 million kilowatt hours, and this capacity would be capable of further development. Dr. von Breitenbach then dealt with the general question of electricity supply. He said that the question how the Empire and the States would divide the electricity supply of the country was receiving everyone's consideration. The Government had taken inter-connection as their goal. The State Governments would co-operate in developing an adequate supply, in the removal of unsatisfactory conditions, and in obtaining the greatest possible uniformity and economy in the supply of new areas.

(To be concluded.)

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 116,731 (April 18, 1917).—S. B. Stanton, 44 Pererell Park Road, Plymouth.—Guards for lifts or hoists.

116,580 (July 7, 1917).—Thomas Caink, Fort Royal Hill, Worcester.—Air-lifts for sewage sludge.

116,550 (June 16, 1917).—British Plaster Board, Ltd., Birkenhead Road, Seacombe, Chester.—Composite board or slab intended for building purposes and apparatus for making the same.

116,589 (July 27, 1917).—C. H. Nixon, 248 Forest Avenue, Detroit, Wayne, Mich., U.S.A.—Hinge.

116,595 (July 31, 1917).—R. G. Philip Embsay, Skipton, York, and W. H. Poole, 8 Plevna Terrace, Bingley, York.—Floors.

116,599 (Aug. 3, 1917).—William Coackley, 8 Broad Street, Pendleton, Manchester.—Fittings for use in glazing roof structures.

116,604 (Aug. 10, 1917).—Zellstoff-fabrik Waldhof, Mannheim-Waldhoff, Germany.—Machine for comminuting wood.

116,609 (Aug. 23, 1917).—Frederick Sherwood, 38 Ashton Road, North Birmingham.—Construction of domestic gas cooking stoves.

116,642 (Nov. 13, 1917).—A. J. Willcocks, 2nd-Lieut., Efford Fort, Laira, near Plymouth.—Fireplaces.

116,649 (Oct. 18, 1916).—A. A. R. Lang, 30 Market Street, Greenock, Renfrewshire. Apparatus for securing a dustless road surface.

116,667 (Feb. 1, 1918).—E. A. Brady, 10th and Water Streets, Oregon, Clackamas, Oregon, U.S.A. —Weather strips for doors.

116,672 (Feb. 11, 1918).—T. Robinson & Son, and C. J. Robinson, Railway Works, Rochdale, Lancs.—Circular saw benches and band resawing machines.

116,681 (March 22, 1918).—Edmund Vaugham, Waterdale, Compton, Wolverhampton, and S. P. Bryan, 45 Lea Road, Wolverhampton.—Cylinder locks and latches.

116,738 (May 21, 1917).—James Watson, The Art Works, Youghal, Cork, Artist.—Process for utilising sheet or the like glass for surface decoration.

116,743 (June 13, 1917).—James Scott, 124 Warton Terrace, Heaton, Newcastle-on-Tyne.—Sliding doors.

116,745 (June 15, 1917).—Lambert Process Co., Chicago, Ill., U.S.A.—Method of burning bricks and the like.

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VARIETIES.

The death is announced of Mr. Richard Edward Hughes, architect and surveyor, Rhyl.

Mr. Charles Brand, builder and contractor, of Railway Street, Braintree, died last week aged eighty-two.

Mr. James McDermott, builder, Liverpool, whose will has just been proved, left £5,218.

The Cavan District Council are about to expend a sum of £850 on repairs to bridges.

The Yeovil District Council have elected a committee to inspect various sites for the erection of houses.

The Tata Steel Co., India, have acquired additional land and will expend £2,000,000 in extensions within ten years.

The Brighton Town Council have resolved to purchase after the war Moulscombe estate of 424 acres for a garden suburb at a cost of £42,500.

Tenders are being invited for the erection of mills at Castlerea, co. Roscommon, for the Castlerea Milling and Development Co.

A stained-glass window has been placed in St. Michael's Church, Garton-in-Holderness, to the memory of Sub-Lieutenant Edgar Donovan, killed in Flanders.

Major H. Calverley has placed Oulton Hall, Woodlesford, at the disposal of the military authorities as a hospital for officers.

The Toronto Legislature has voted a sum of £400,000 for the erection, at a cost not exceeding £500 each, of workingmen's houses.

Three sites have been purchased in the Holloway, Droitwich, on which to erect twelve more houses for the working classes.

Mr. John F. Wright, of Frimley Hall, Camberley, head of the firm of J. & E. Wright, gas stove manufacturers, left estate valued at £114,675.

Mr. Frank Biggin, who has been associated with the Brightside Foundry and Engineering Co. for the past thirty-six years, has been elected a director of that company.

Sir John Mowlem Burt, of Swanage, chairman of John Mowlem & Co., the well-known firm of contractors, left estate valued at £206,453, net personalty being £180,932.

Mr. James Montgomerie, B.Sc., principal surveyor of Lloyds for Scotland, has taken the degree of Doctor of Science at London University.

The York Corporation Streets and Buildings Committee have approved the following plans:—A. Watson, temporary shed, 29 Monkgate; A. W. Cooper, temporary shed, 29 Brownlow Street; Hill Bros., additions, James Street; and R. Abbot & Son, temporary building, Ambrose Street.

Major Francis Bennett Goldney, M.P. for Canterbury, recently killed in a motor accident in France, was an antiquarian and student of archæology. He was a Fellow of the Society of Antiquaries and an honorary director of the Royal Museum at Canterbury.

Bristol has entered into the question of housing accommodation very enthusiastically, and details of their proposed garden suburb at Shirehampton, which were given by Mr. Councillor Savory to the members of the Council of the Bristol Civic League last week, proved of considerable interest.

Lieutenant-Colonel F. W. M. Newell has been awarded the Belgian Croix de Guerre and the Order of the Crown for the rapid construction under shell fire of a bridge in place of one destroyed by artillery fire. He is a brother of Mr. T. M. Newell, engineer-in-chief to the Mersey Dock Board.

Second-Lieutenant John Morgan, Gordon Highlanders, previously reported missing, is now officially reported killed in action on March 22. Before joining up he was a solicitor in Aberdeen. He was the eldest son of the late Mr. Francis W. G. Morgan, builder, and of Mrs. Morgan, 55 Deveron Street, Huntly.

At a meeting of the Dwellings for the Working Classes Committee of the Gloucester City Council, the Sub-Committee reported that they had inspected the land of the Corporation in various parts of the city with a view to the selection of sites suitable for the erection of dwellings for the working classes. After considering the report of the Sub-Committee, the Committee instructed the surveyor to prepare a plan for erecting about 150 houses in one district and about 50 in another.

The annual general meeting of the Commissioners of the Aberdeen county and municipal buildings has just been held, when the abstract of accounts was submitted by Mr. J. T. Sorley, city chamberlain, the treasurer. Court House maintenance cost £436 2*s.* 7*d.* The estimate showed that the sum of £223 6*s.* 2*d.* fell to be provided for the current year, and the Finance Committee recommended an assessment of 1-35th of a penny per £ against 1-60th last year. Abstract and recommendation were adopted.

At Holywell Rural District Council the question of the housing schemes for Bagillt, Mostyn, and Northop, which the Council had in hand prior to the war was discussed. It appeared the Local Government Board had decided that there must only be eight instead of twelve houses to the acre in each case. The Board also asked the Council to increase their estimate of cost by 50 per cent., owing to the increased price of materials and labour. Mr. J. Petrie, the chairman of the Housing Committee, said they could not move any further in the matter until the war was over, but they would act immediately then, as they had all their plans and sites ready.

Dawlish Urban Council paid their annual visit of inspection to their waterworks at the Thorns on Thursday last. Mr. W. T. Leaman (chairman) presided at the luncheon, and spoke of the need of a bureau of information for the town. In proposing the health of the chairman of the Water Committee (Mr. J. Gamlin), Mr. F. G. Avant said the improvement of the water supply was largely due to his persistent efforts. Mr. J. Gamlin, in reply, pointed out that notwithstanding a dry winter and dry spring, the town had enjoyed a plentiful supply of water. Allusion having been made to the housing question, Mr. J. H. G. Lamacraft said builders in Dawlish had been severely handicapped by the fact that the landowners had been so tight-fisted over the land that they had been unable to get it at anything like a fair price.

The Committee on Production announce the following award in regard to a claim by the Scottish building trade for an advance of 4*d.* an hour on existing rates of wages:—"To workmen who, since the outbreak of war, have received general advances amounting to 4¼*d.* an hour and upwards, but less than 5½*d.* an hour, including bonuses, there shall be paid such further increase as shall make the advances up to 5½*d.* an hour over pre-war rates. In cases in which the general advances have amounted to less than 4¼*d.* an hour the workmen concerned shall receive a further increase of 1¼*d.* an hour. Any payment made to any of the workmen concerned in respect of the bonus of 12½ per cent. or 7½ per cent. on earnings granted to certain munitions workers under statutory rules and orders, 1917, or otherwise, is to be excluded from the calculation of the amount of general advances referred to."

At the quarterly meeting of the South Wales Building Trades Employers' Federation, held at the Hotel Cameron, Swansea, on Thursday last week, Mr. D. Anderson presiding, the constitution of the new Building Trades Joint Council, which will in future deal with all matters relating to wages and conditions of labour throughout the area of South Wales and Monmouthshire, was submitted and approved. The employers agree that they will not employ or retain in their employ any workman who is not a member of a Trades Union affiliated to the Council, except general foremen and employers' direct representatives. The employees agree that they will not work for any person, firm, company, syndicate, building association, public utility society, trust, or any similar bodies engaged in constructional work who are not members of a builders' association affiliated to the Council, except in the case of large works, such as steel and other works, who may carry out extension works inside their works without such affiliation. The proposed new code of working rules was considered and approved as further amended.

Lieutenant Charles Taylor Whiteley, A.R.I.B.A., whose death from wounds on July 1, at the early age of thirty-two was recently recorded, was a member of two old Huddersfield families, being a grandson of the late William Whiteley, machine maker, Lockwood, and of the late Joseph Taylor, iron and steel merchant, Huddersfield. He was the younger son of the late Tom Whiteley, of Hall Royd, Shipley, Bradford. Educated at Pembroke College, Harrogate, and later at the Bradford Grammar School, Bradford, he served his articles with Mr. Rhodes Calvert, of Forster Square, Bradford, and with whom he was engaged as assistant at the time of his enlistment in 1915, when he then joined the Artists' Rifles, and later was gazetted Second-Lieutenant in the Royal Warwicks. After eighteen months' active service in France, he was sent for a period of duty in England, and after two months was recalled for service at the Front, where he met his death some six weeks later. He was an Associate of the Royal Institute of British Architects and a Professional Associate of the Surveyors' Institute, and was unmarried.

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THE
Architect and Contract Reporter.
FRIDAY, AUGUST 9, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 1, after that date on payment of 4d.

COMPETITIONS OPEN.

SAO PAULO (BRAZIL).—Sept. 7.—H.M. Consul at Sao Paulo has forwarded a supply of plans and instructions (in English) in connection with an international competition of plans and designs for the construction of a national monument for the purpose of "perpetuating the date of the proclamation of the independence of Brazil and to render homage to the principal historical figures who took part in this momentous occasion." The monument is to be erected on the site of the Ypiranga hill, in the State of Sao Paulo. Granite and bronze are to be the chief materials employed in this work, the total cost of which is not to exceed 1,000 contos of reis (1,000,000 milreis) currency. Department of Commercial Intelligence, 73 Basinghall Street, E.C. 2.

WOMBWELL.—The Council invite architects practising within thirty miles of Wombwell to submit designs for the laying-out of lands situate in King's Road, Wombwell, and Cemetery Road, Jump and Hemingfield, and for the erection of workmen's dwellings thereon on garden city lines. Particulars, conditions, and plans of the sites can be obtained from Mr. Percy Milnes Walker, solicitor, on payment of £5 5s., which will be returned on receipt of a bona-fide design.

CONTRACTS OPEN.

DUNSTABLE.—Aug. 13.—For facing portion of filter walls at sewage farm, Chalk Hill, near Dunstable, with Staffordshire bricks, for the Corporation. Mr. W. F. Wilkins, borough surveyor, Dunstable.

LONDON.—Aug. 15.—For external painting, repairs, &c., at Fulham Military Hospital, Fulham Palace Road, W. 6, for the Fulham Board of Guardians. Mr. E. Y. Mott, clerk, 129 Fulham Palace Road, W. 6. Deposit £1.

MANCHESTER.—Aug. 17.—For painting iron and steel work at Hulme Street tunnel, for the Paving, Sewering, and Highways Committee. City Engineer's Office, Town Hall, Manchester. Deposit £1 1s.

MANCHESTER.—Aug. 17.—For painting various bridges in the city (two contracts), for the Paving, Sewering, and Highways Committee. City Engineer's Office, Town Hall, Manchester. Deposit £2 2s.

TENDERS.

GLASGOW.

For painting work at properties in Gallow Gate and Schipka Pass, for the Corporation.

J. STIRLING (*accepted*)	£195 15 0

LONDON.

For retubing boiler at Prospect Terrace school, for the London County Council Education Committee.

PALOWKAR & SONS (*recommended*)	£53 10 0

For removing a boiler from the Settles Street school and fixing boiler in its place, for the London County Council Education Committee.

W. G. CANNON & SONS, LTD. (*recommended*)	£85 0 0

For maintenance and repair of carriageways and footways of London Bridge for twelve months, for the City Corporation.

J. MOWLEM & CO. (*accepted*)	£985 0 0

For maintenance and repair of carriageways and footways of Blackfriars Bridge for one year, for the City Corporation.

G. J. ANDERSON (*accepted*)	£1,062 0 0

For equipment of national kitchen at Clapham, for the Wandsworth Borough Council.

Accepted tenders.

J. NUTTING & SONS, joinery work	£232 17 6
STAINES KITCHEN EQUIPMENT CO., kitchen equipment	198 12 6
RICHMOND GAS STOVE AND METER CO., kitchen equipment	177 10 10
T. & W. BAKER, hot and cold water supply pipes, &c.	97 11 0
T. & W. BAKER, gas supply pipes and connections	57 0 0

WALTHAMSTOW.

For supply of electric hoist to the electricity department, for the Walthamstow Urban District Council.

VAUGHAN CRANE CO., LTD. (*accepted*)	£116 0 0

WOLVERHAMPTON.

For supply of expanded metal partitions to enclose extra high-tension apparatus, &c., for the Electricity Committee.

HALLS, LTD. (*accepted*)	£57 0 0

MR. WALTER ALDRIDGE has been elected Master of the Worshipful Company of Joiners.

THE Coventry City Council has decided to purchase land at Foleshill at a cost of £6,000 as a site for the erection of new electricity works.

EXPENDITURE in Canada on building operations has considerably increased during the past twelve months. Particularly has this been the case in the Western Provinces.

THE Roads and Bridges Committee of the Holland County Council, at their last meeting held at Spalding, appointed Mr. Moody, the North Holland surveyor, to act as county surveyor of the whole district at a remuneration of £300 per annum and an allowance of £100 per annum for travelling expenses.

THE Scotch church in Oldham Street, Liverpool, has totally collapsed; it was closed for worship in September 1907. Unfortunately the church was being used to store the parts of the organ which is being built in Liverpool Cathedral, and they are unfortunately buried in the ruins. The building was erected in 1803 by some leading Scotsmen of the city, including Sir J. Gladstone, the father of the late Mr. William Ewart Gladstone.

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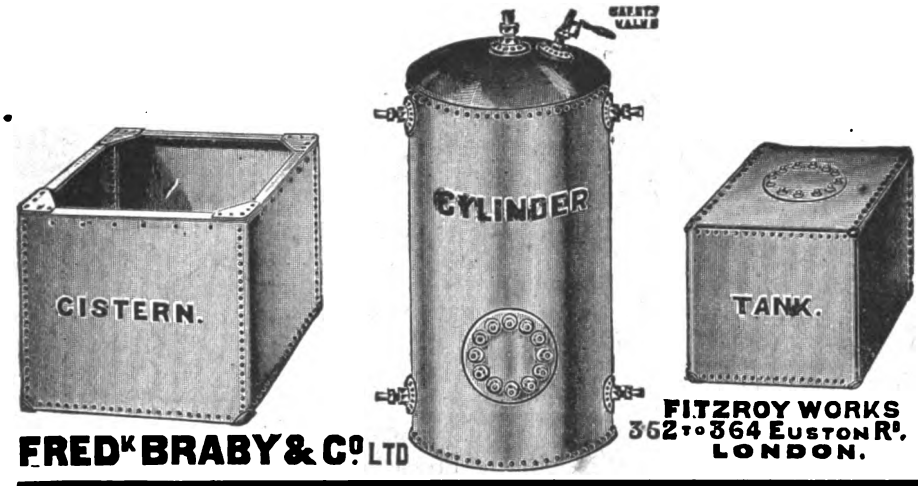
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RECONSTRUCTION IN GERMANY AND AUSTRIA.

(From the "Board of Trade Journal.")

(Concluded from last week.)

Prussian Government's Policy.

The Government intended to take over as a general rule the generation and transmission of current, but not its distribution to consumers. There was no intention of making municipal or private works close down, but the area of supply of distributing works would be carefully defined in order to exclude unnecessary competition and to secure an adequate supply for the whole area.

The "Hamburgischer Correspondent" for November 23, 1917, reported that the Bill was well received in the Prussian Lower House. The same paper for January 28 announced that the Bill had been accepted by the Budget Committee of the Lower House.

The Committee adopted the following resolution with reference to von Breitenbach's statement on November 17, 1917, regarding State control of electricity supply: "The Committee agrees in general to the Government statement in favour of State control of the supply of electricity, with the proviso that the Government should establish as soon as possible provincial and district committees in order to prepare and carry out all suitable measures for a systematic supply of electricity to the country, while in constant touch with these committees." They also drew up a proposal regarding the protection of existing efficient electricity works.

Proposals in Austria-Hungary.

In Austria very much the same general lines have been followed as in Germany. The Government's programme was outlined in a speech by the Premier in September, 1917. He said that there would be a great development of water-power, and that the electrical system would be placed under the centralised control of a special Department of the Ministry of Public Works. The "Neue Freie Presse" for November 28, 1917, announced the establishment of the Department foreshadowed by the Premier in his speech. The Department's scope would include economic, financial, legislative, and administrative affairs connected with electricity. An Electricity Bill to give effect to the Government's proposals was introduced by the Minister of Public Works on February 5, 1918.

The Government's Electricity Bill.

The Minister of Public Works, Ritter von Homann, emphasised the importance of developing electricity, and the backward state of Austria, especially with regard to the use of water power. He referred to the lack of method in the electricity system, and to the large number of small works. Fifty-nine per cent. of the works had a generator capacity of only 100 kw., or 4 per cent. of the total capacity, and only one and a-half per cent. had a generator capacity exceeding 5,000 kw. Those big works, however, represented half the total capacity. Von Homann said that progress must be made on the line of large works and their inter-connection, as in Bavaria, Switzerland, and Northern Italy. The Bill was only the beginning of the work which would be necessary to attain the object the Government had in view—that is, a uniform and economical supply of electricity. The Bill divided undertakings into three classes: public undertakings—those established by public corporations; semi-public—those in which public corporations had a predominating share; and other undertakings, which included all private concerns. The Bill provided that in future concessions would be necessary. Public and semi-public undertakings would be able to obtain concessions for 90 years, but private concerns would be limited to 60 years. The State would give financial help, which would take the form either of State participation in capital advances, permission to issue debentures free of tax, or a guarantee to take a certain amount of current and to inter-connect stations. The technical perfection of stations would be insisted upon, differential treatment of consumers would be prohibited, as would any monopoly of installation by the electrical undertakings, tariffs would be supervised, and the State would take a percentage of the profits. The undertakings would retain 6 per cent. on their invested capital; of the profits between 6 per cent. and 10 per cent. the State would receive one-third, and of those above 10 per cent. the State would receive one-half. State participation in the profits would only apply to undertakings which were enjoying special State privileges—such as the right of expropriation, or the guarantee of specified area of supply, or the special financial concessions which have been mentioned—or to undertakings which had been allowed the use of public waters or State sources of energy. In the case of these undertakings the right of redemption would also apply. In order to make the nationalisation of the electricity supply possible the right to redeem would be incorporated in the Act. Unless otherwise stated in the concession, the right to redeem would apply at the end of the first 25 years, and afterwards at the end of every five years. The undertaking would receive compensation, and this would be on the basis of its then value. Undertakings incorporated during the last five years would receive special terms, as their value would be only fully developed in the future. At the end of the term of the concession, in any case, the undertakings would pass into the possession of the State. The Bill also contained provisions for an investigation to be made regarding private works in order to prevent them interfering with the plan for a united system, and also provided machinery for the setting up of an Electricity Commission.

Approval of the Bill.

The "Neue Freie Presse" for March 24 stated that the Bill had been referred to the Economic Committee, and that so far no objections had been raised to its essential features. In the meantime the provincial authorities in the Steiermark, aided by the industries, were establishing a joint undertaking in which the province, the communes and private capital would have a share, the Government participating in so far as hydraulic power might be required for electric traction on the railways. The "Neue Freie Presse" also emphasised the fact that the development of certain industries—for example, those producing nitrogen, aluminium, &c.—and the establishment of electro-chemical and electro-metallurgical industries were only possible if adequate power were available.

Water Power.

The "Zeit" for November 28 announced that the Minister of Railways had issued, in connection with the Government programme, a pamphlet on "The Preparatory Measures of the Austrian State Railway Administration for the exploitation of Water Power and the Electrification of the Main Railway Lines," which contains, amongst other things, an estimate that the Alpine water power amounts to 3,000,000 h.p., of which only eight per cent. is now being used. According to the "Wirtschaftszeitung der Zentralmächte" for October 5, 1917, a group of manufacturers is also engaged in working out schemes for the better utilisation of the available water power. One scheme is for the diversion of the Danube in the neighbourhood of the Wallsee. Another is concerned with the possibilities of using the water power of the Thaya.

HUNGARY.

The "Zeit" for April 3, 1918, announced that the Hungarian Minister of Commerce had ordered an Electricity Bill to be drafted on similar lines to those of the Austrian Bill. The Transition Ministry has in

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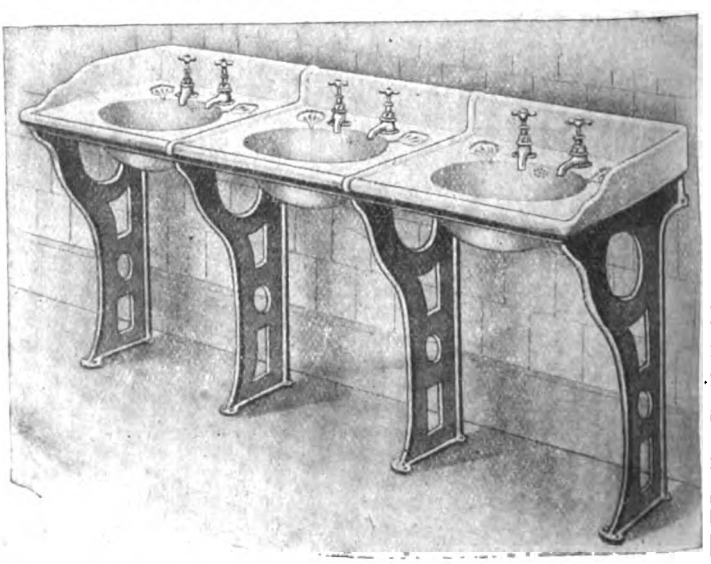
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addition worked out a plan for dividing Hungary into districts, each of which will be served by a central electrical station worked by water power. A special Energy Section of the Ministry will deal with the utilisation of water power and natural gas.

CRYSTAL PALACE SCHOOL OF ENGINEERING.

Mr. H. E. Jones, President of the Institute of Civil Engineers, occupied the chair in the lecture theatre of the above school at Anerley Hill, on July 31, and handed to the successful students the certificates awarded by the examiners—Mr. E. Lancaster Burne, M.I.M.E., A.M.I.C.E., and Mr. F. G. Bloyd, past president Society of Engineers.

After a few introductory remarks the Chairman called on Mr. Maurice Wilson, Vice-Principal of the school, to read the Examiners' Reports, in connection with the present 137th award of certificates, forming the close of the second term of the 46th year. These reports bore on the first year's course of Mechanical Engineering, more particularly in connection with "Railways, their construction and appliances," and the second year's course of Civil Engineering. The certificate of honour, for six certificates obtained in the school course, none lower than third in order of merit, was awarded to B. G. Simmons, and the Principal having reported to the examiners that Mr. L. T. Beck had fulfilled the conditions entitling him to a medal of the school, he was awarded that distinction, through having obtained the necessary eight certificates, none of which were below third in order of merit.

In the course of his address to the students the Chairman remarked that he was personally much impressed with the training which the students had the advantage of at this school, and the combination of practice with theory found there was of inestimable advantage. In anticipation of the work that would be requisite after the war, engineers would have to make good the waste and destruction which had gone on so long and to such an enormous extent, in connection with buildings, machinery, and materials. Then engineers would be called upon to undertake a vast amount of reparation work in connection with railways and docks. Altogether there would be a vast field of labour for engineers, and the students would have ample opportunities of profiting by the instruction which they had been privileged to receive at this school.

A vote of thanks was passed to the examiners for their services, and the Principal, Mr. J. W. Wilson, in proposing a vote of thanks to Mr. H. E. Jones for presiding on the occasion, said that the latter occupied the highest position in the engineering world at the present time, and there were 1,200 old students of the school in different parts of the world, engaged in important works of various kinds.

The Chairman, in responding to the vote of thanks, said there were 9,000 members of the Institute of Civil Engineers distributed all over the world, and among his responsibilities as President was the encouragement of the younger members of the profession, while for every student present there was in the future an opportunity for distinction, just as Napoleon said there was a bâton in the knapsack of every soldier.

BRITISH PATENT SPECIFICATION.

No. 115,952 (May 30, 1918).—Improvements in Glazing.—Joseph Gridley, Belmont, St. John's Road, Hampton Wick, Middlesex, Timber Inspector.

This invention relates to the glazing of windows, lights and like frames, and more especially to horticultural glazing where the panes of glass are lapped, the upper one on the lower. The object of the invention is to cheapen such work by rendering it possible to employ unskilled labour and less material, and further to facilitate repairs; this invention attains these ends by rendering unnecessary the use of putty, and in particular of top putties. It has been proposed previously to form a clip of sheet metal bent with prongs driven into the sash bar or other part of the frame in such a position as

Fig 1.

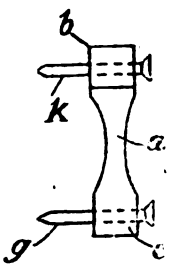


Fig 2.

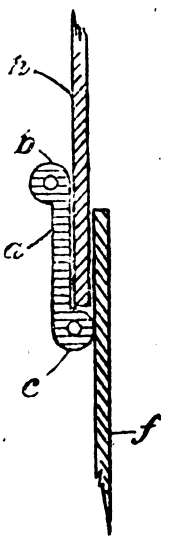
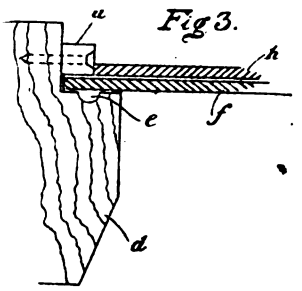
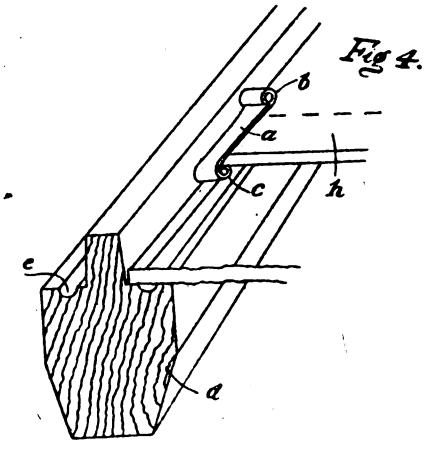


Fig 3.



to prevent the lower of a pane or panes of glass from falling out of the frame and to support the weight of the upper pane. According to the present invention, the glazing clip, for example, of thin metal is formed with loops, or eyes, and is secured in position by screws, pins, or small nails passed through the eyes and driven into the frame to be glazed. While it is convenient to form the clip of metal, yet it can quite well be made of leather, indiarubber, felt, composition, celluloid, or even of wood or bone, but preferably of a material capable of resisting atmospheric influence for a considerable time. An example of a clip in accordance with the invention is shown in the accompanying drawings, in which fig. 1 is a front elevation of the clip, showing the fixing pins. Fig. 2 is a side elevation showing two panes of

Fig 4.



glass held in position thereby. Fig. 3 is a view of fig. 2 from below, and fig. 4 is a perspective view showing the clip in position. The form of clip shown in the drawings consists of a strip of metal *a*, curled at either end to form two eyes, *b*, *c* on opposite sides of the strip. The frame or sash bar *d*, or both, is preferably grooved as shown at *e* at the bottom of the rabbet, especially where the glazing is to be carried out without putty, but where bottom putties are used the groove *e* is optional. In use the lower pane of glass *f* is first placed in position, and, in order to prevent this falling forward it is held just below its upper edge by a clip *a*, which is laid on the lower pane *f* with its lower edge *c* next to the bar or other member *d*, a pin *g* forced through the lower

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eye into the bar *d*. The space left behind the clip *a* above the lower edge *c* is to take the lower edge of the upper pane of glass *h*, and when the latter is placed in position the clip *a* is firmly but gently turned down on to the upper pane *h*, and then the second pin *k* is driven home through the upper eye *b*, and this is repeated at all other points necessary. It will be noted that the clip is hollowed or curved away on either side in fig. 1. The purpose of this is to enable a tool to be inserted between the clip *a* and the sash bar or frame member *d* in order to prise off the clip when needed for repairs. In the latter case after the insertion of a new pane of glass, the clip is fixed as before. The clips are especially provided to meet the want of something of a permanent nature.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 114,426 (March 15, 1918, dated under International Convention, March 23, 1917).—Mario Lenti, 15 Via Galvani, Milan.—Sliding gauges for measurement.

116,766 (June 25, 1917).—J. L. Lawson, 119A Ivy Road, Cricklewood, N.W. 2.—Safety locks.

116,768 (June 25, 1917).—L. A. Edwards, 81 St. Margaret's Road, Twickenham.—Fireless cookers.

116,777 (June 30, 1917).—Samuel Sutcliffe, Council House, Mytholmroyd, York.—Apparatus for tarring road surfaces and the like.

116,783 (July 5, 1917).—H. E. D. Rudman, Chippenham, Wilts.—Wood sawing machinery.

116,803 (August 15, 1917).—W. H. Heywood, Bayhall Works, Huddersfield, York.—Glazing bars.

Any of the above specifications may be obtained from J. D. Roots.

VARIETIES.

Mr. William Henry Ramsden, surveyor, of Dewsbury, left £10,312.

The Frome Urban Council have passed the plans for conversion of Welshmill House into two dwelling houses.

Mr. William Birrell, architect, St. Anns, Fergus Place, Kirkcaldy, left estate valued at £1,675 1*s*. 2*d*.

Queen Alexandra has consented to open the Nurse Edith Cavell Memorial Home at Norwich.

The late Mr. Robert Willey, F.R.I.B.A., of "Elmside," Ealing, S.W., left estate valued at £22,335.

The Chelmsford Town Council have adopted a scheme to erect immediately 960 houses for workpeople on a site which will permit the erection of twelve houses per acre.

Plans have been submitted to the Stockton Rural District Council for the erection of nine dwelling houses at Haverton Hill for the Furness Shipbuilding Co., Ltd.

Oakwood Hall, Rotherham, which was partly destroyed by fire recently, is to be restored. The Hall was at the time of the outbreak in use as a V.A.D. Red Cross hospital.

The Grays Urban Council have decided to purchase 67 acres of the Grays Hall estate at a cost of £150 per acre for the purposes of their housing scheme.

The Hendon Rural District Council (Middlesex) have received the sanction of the Local Government Board to prepare a town-planning scheme for Great Stanmore, Little Stanmore, and Edgware.

The residence of the late Joseph Chamberlain, "Highbury," Moor Green, Birmingham, has been presented by Mr. Austin Chamberlain to the city. For the past three years it has been in use as a V.A.D. Red Cross hospital.

Damage which is estimated at £20,000 has been caused by a fire which broke out on the premises of the Fulham Pottery and Cheavin Filter Co., King's Road, Fulham, S.W., on Sunday morning.

The Notts County Council have decided to purchase premises numbers 22, 24, 26, and 28 High Pavement, Nottingham, for the sum of £12,000 for the extension of the Shire Hall.

The Peterborough Infirmary Governors have passed a resolution against a scheme for the extension of the present infirmary, but in favour of erecting an entirely new building on a more open site.

The forthcoming marriage is announced of Lieutenant T. Harold Hughes, A.R.I.B.A., and Miss Edith Mary Burnet, daughter of Mrs. Wardlaw Burnet, of 59 Queen's Road, Aberdeen.

On Friday morning last damage estimated at over £15,000 was caused by an outbreak of fire at the sawmills and timber yard of Messrs. T. W. Rigby & Co., Colwick Street, Deptford, S.E.

Colonel William R. Smith, M.D., barrister-at-law, Principal of the Royal Institute of Public Health, one of the Sheriffs-elect of the City of London, has been invited to become one of the candidates for the Scotch Universities at the next Parliamentary Election.

At the last meeting of Orsett District Council it was reported that a letter had been received from the West Thurrock Parish Council drawing attention to the urgent need for a new mortuary in that district. A reply was forwarded agreeing to erect a suitable building if the Parish Council provide a site in the burial ground.

Colonel J. H. Wilkinson, of Ashfurlong Hall, has presented to the City of Birmingham, Barr Beacon, which comprises 150 acres of land, on condition that a site on the summit should be reserved for a monument to be erected by public subscription to the memory of the men and women of Warwickshire and Staffordshire who have given their lives for their country in this present war.

At the last meeting of the Halsted Rural Council a letter was received from the clerk to the County Council stating that at the request of the Minister of Reconstruction the County Council had appointed a Reconstruction Committee to obtain information to enable them to judge of the housing requirements in every rural parish in Essex and to report as to the number of houses required for labourers.

The General Works Committee of the Wakefield City Council have considered the recommendation of the city surveyor as to areas proposed to be included in the town-planning scheme for the city and surrounding districts, and it was decided that application be made to the Local Government Board for sanction to prepare a town-planning scheme.

The Council of the Y.M.C.A. at Scunthorpe have decided to proceed at once with the preparation of an appeal for £15,000, the first £2,000 to be earmarked for the purchase of a large site at the top of High Street, and the remainder to be used at the conclusion of the war for the erection of a memorial Y.M.C.A. building on the above-named site.

At the monthly meeting of the Conway Rural Council, Mr. Robert Ellis (chairman) presiding, the surveyor submitted a sewerage and water scheme for the parish of Dolgarrog, where the Aluminium Corporation are erecting 300 houses for their workmen. The scheme for sewerage was estimated to cost £6,500 and that of water £1,289 3*s*. 11*d*. It was decided to refer the matter to a parish meeting at Dolgarrog.

The Scottish Local Government Board have informed the Linlithgow District Committee that they have been instructed to prepare a scheme for the erection of 1,300 houses at Port Edgar for the Admiralty workpeople and their families, and have requested the District Committee to state what provision they are prepared to make as to road facilities, drainage, and water supply. It is expected that the new houses will provide accommodation for some 6,000 people—workmen and their families.

The erection and opening of the Hippodrome and the Coliseum marked the change which has taken place in houses of entertainment in the West End of London. Now passes the London Pavilion, no longer a music hall, but having passed through the hands of the decorator. The old Pav., as it was known, could not by any stretch of imagination be termed a thing of beauty; to-day it has been transformed, tastefully decorated with an admirably carried out scheme of lighting, and all this carried out with little structural alteration. The Pavilion Music Hall will now enter the field as a house placing before its patrons the class and style of entertainment known as "The Revue."

At a meeting of the Greenock and Port Glasgow Local Advisory Committee—Sir Hugh Shaw Stewart, Bart., C.B., chairman—it was intimated that the Minister of Labour had caused a letter to be addressed to the Minister of National Service on the question of certain skilled men engaged on building workmen's houses in the district having been called up for military service. The question was raised as to whether a sufficient number of boys were being secured to meet the local demand for apprentices. It was stated that although the demand for apprentices was in excess of the number of lads available there were still found to be lads who preferred casual work at high wages to binding themselves as apprentices.

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THE
Architect and Contract Reporter.
FRIDAY, AUGUST 16, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than* 2 P.M. *on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 1, after that date on payment of 4d.

COMPETITIONS OPEN.

SAO PAULO (BRAZIL).—Sept. 7.—H.M. Consul at Sao Paulo has forwarded a supply of plans and instructions (in English) in connection with an international competition of plans and designs for the construction of a national monument for the purpose of "perpetuating the date of the proclamation of the independence of Brazil and to render homage to the principal historical figures who took part in this momentous occasion." The monument is to be erected on the site of the Ypiranga hill, in the State of Sao Paulo. Granite and bronze are to be the chief materials employed in this work, the total cost of which is not to exceed 1,000 contos of reis (1,000,000 milreis) currency. Department of Commercial Intelligence, 73 Basinghall Street, E.C. 2.

WOMBWELL.—The Council invite architects practising within thirty miles of Wombwell to submit designs for the laying-out of lands situate in King's Road, Wombwell, and Cemetery Road, Jump and Hemingfield, and for the erection of workmen's dwellings thereon on garden city lines. Particulars, conditions, and plans of the sites can be obtained from Mr. Percy Milnes Walker, solicitor, on payment of £5 5*s*., which will be returned on receipt of a bona-fide design.

CONTRACTS OPEN.

GEDNEY DAWSMERE (LINCS.).—Aug. 19.—For repairs and renovations to Gedney Dawsmere Council school, for the Holland County Council. Mr. F. Parker, F.S.A., county architect, Boston.

MANCHESTER.—Aug. 17.—For painting various bridges in the city (two contracts), for the Paving, Sewering, and Highways Committee. City Engineer's Office, Town Hall, Manchester. Deposit £2 2*s*.

MANCHESTER.—Aug. 17.—For painting iron and steel work at Hulme Street tunnel, for the Paving, Sewering, and Highways Committee. City Engineer's Office, Town Hall, Manchester. Deposit £1 1*s*.

MITCHAM.—Sept. 5.—For painting and decorating the isolation hospital, Beddington Corner, near Mitcham Junction, for the Wandle Valley Joint Hospital Board. Mr. E. J. Gowen, clerk, Council Offices, Purley.

PLYMOUTH.—Aug. 19.—For work at certain scattered homes, of the Guardians. Mr. W. H. Davy, clerk, Workhouse, Plymouth.

STROOD (KENT).—Aug. 27.—For painting external wood and iron work at the Guardians' institution at Strood, for the Guardians of Strood Union. Mr. G. E. Bond, 384 High Street, Rochester.

WIGAN.—Aug. 19.—For work required in connection with extension of electricity works, Bradford Place, Wigan, for the Corporation. Mr. R. B. Donald, A.M.I.C.E., borough engineer, Municipal Offices, Wigan.

TENDERS.

ALNWICK.

For water main in Prudhoe and Stott Streets, for the Alnwick Urban District Council.

J. MACDONALD (*accepted*)	£41 7 6

DERBY.

For excavation work in connection with extension of generation station, for the Corporation.

W. WALKERDINE, LTD. (*accepted*)	£297 0 0

HOVE.

For external painting of the public library, for the Town Council.

A. W. LENEY, Hove (*accepted*)	£65 0 0

LONDON.

For alterations, &c., at the pavilion, for the Lewisham Board of Guardians.

A. T. PEYTON (*accepted*)	£335 0 0

For external painting works at Park Hospital, for the Metropolitan Asylums Board.

A. H. Inns	£217 0 0
L. Kazak	194 0 0
C. H. Boyd & Son, 6 Dyer's Buildings, Holborn (*recommended*)	172 0 0

For tarring roofs, &c., of annexes at Tooting Military Hospital, for the Guardians of Wandsworth Union.

F. & G. Foster & Co., South Norwood, S.E. 25 (*accepted*)	£67 0 0

For repaving Soho Square and Wardour Street with asphaltic material, for the Westminster City Council.

LIMMER AND TRINIDAD LAKE ASPHALTE CO., Soho Square, £3,527 10*s*., Wardour Street £1,955.

SUTTON (NEAR KEIGHLEY).

For painting in Sutton Park and recreation ground, also in Sutton Mill recreation ground, for the Sutton Parish Council.

T. HORSFALL (*accepted*)	£40 10 0

WAKEFIELD.

For construction of Booth Dean gauge basins and emergency dam, for the Wakefield Corporation.

J. M. FIRTH, Todmorden (*accepted*)	£5,941 0 0

WANSTEAD.

For painting and repairs at the isolation hospital, for the Urban District Council.

A. Woollaston	£366 14 0
J. Jolliffe	365 8 6
F. C. Starke, Manor Park	354 0 0
A. W. Robins	329 15 0

WOLSINGHAM.

For erection of ten shelters at Holywood Hall Sanatorium, for the Durham County Council.

S. NELSON, Durham (*accepted*)	£215 0 0

A COMPANY has been registered as Drakers, Ltd., builders and contractors, 62 King William Street, E.C. 4, with a capital of £10,000 in £1 shares.

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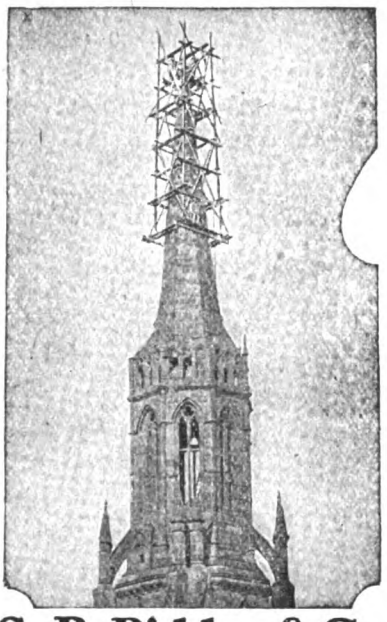
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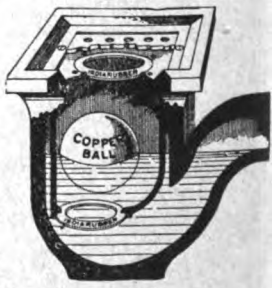
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THE FUEL RATIONING ORDER.

THE NATIONAL IMPORTANCE OF THE USE OF GAS FOR FUEL.

The public run the risk of seriously mis-understanding the new fuel rationing order, and consequently, as it happens, of gravely prejudicing national interests, unless a fundamental point which is generally not understood is promptly made clear to them. So far, the information they have been given by representatives of the retail coal trade, not perhaps unnaturally, tended rather to obscure this particular point. Hence the need of making it clear because of the vital injury to our fighting forces that might otherwise be wrought.

The scale of allowance per house in the order is in terms of *fuel*, not of *coal*. Because it is stated in "tons," everyone is at first inclined to think that this means an allowance of so many "tons of *coal*."

It does not mean anything of the sort. It means so many "tons" allowed of an abstract thing called (for the purpose of the order) "Standard Fuel," each "ton" of which is declared (for the purpose of the order) to be equal to either one ton of coal or 1½ tons of coke, or 15,000 cubic feet of gas, or 800 Board of Trade units of electricity; and the householder is free to take his allowance in any one (or any combination) of these different forms of "fuel."

It would have saved much mis-understanding if the scale had been drawn up in terms of "units" instead of "tons" of "fuel," each "unit of fuel" being equal to so much coal, coke, gas, or electricity, according to the proportions above mentioned. The public would not then have got it into their heads, as even so well-informed a man as Mr. Edward Smallwood, M.P., would appear to have done, judging by his published utterance on behalf of the coal trade, that they are to be allowed so many tons of "coal," and a small amount of gas or electricity for lighting, which if they choose to go short of light they can use for other purposes—an interpretation very far wide of the mark.

Now the fact is that the Government desire that the use of gas for fuel should be as fully maintained as possible, and that the saving in fuel rendered necessary by the various causes which are tending to a shortage in coal should be made as much as possible in coal previously burnt in crude form.

Why?

Because, firstly, from every ton of coal taken to the gas works and turned into gas, coke, tar and ammoniacal liquor, the country gets (in addition to fuel value substantially greater than that obtained from the coal if burnt direct in the domestic grate) invaluable bye-products from which are made the high explosives so necessary to the Navy and Army, fuel oil for the Navy, fertilisers for the land, important disinfectants, dyes for the manufacturer, and hundreds of other chemical products of great importance to industry—all of which are absolutely wasted when coal is burnt as it comes from the pit.

Because, secondly, as much fuel value is obtained from 750 tons of coal carbonised at the gas works as is obtained from 1,000 tons of coal burnt direct in the grate. That means, (*a*) 25 per cent. saving in the coal resources of the country; (*b*) 25 per cent. saving in the labour required in the mines; and (*c*) more than 25 per cent. saving in the transport required to and in the towns.

The explanatory notes to the order for the guidance of the Fuel Overseers explicitly state: "It is desired to maintain to the largest possible extent the production of gas because of the valuable bye-products resulting from the carbonisation of coal and the national importance attaching to them," so that no one called on to explain the scale of allowances and the object and operation of the order to the public ought to make the blunder or commit the deliberate offence of letting them think that the allowance of "fuel" is an allowance of "coal," with a small supplementary allowance of gas or electricity for lighting which may be used alternatively for fuel. That is an entire misrepresentation of the order against which the public need to be warned at once, or national interests will gravely suffer. So, of course, would their own individual interests, as a serious fall in the output of gas would necessarily be followed by a rise in the price.

The public have been asked by the Government to burn gas or coke rather than raw coal; and if they do so with discretion they will not only do the patriotic thing, but they will also get better fuel value from the quantities of each which they are allowed.

Of gas, they are allowed 15,000 cubic feet. Used wisely, in suitable appliances, this will do the useful *work* of from one to two tons of coal. (It is all that many "slot" consumers use in twelve months, both for lighting and for an amount of cooking they would be very sorry to have to do with one ton of coal.) For fires needed only for a comparatively short time, the amount of coal wasted is enormous; and so for cooking as every housewife knows. Gas at the rate of 15,000 cubic feet in place of one ton of coal will go a great deal further in practical work, if reasonable care be exercised.

Of coke, the householder is allowed 30 cwts. as against 20 cwts. of coal; and there is as much heat value in a hundredweight of the one as the other. The larger quantity is allowed in order to encourage the use of coke, as it is hoped that the output of gas, and consequently coke, will be very generally maintained.

The public will have therefore to remember that by the new order they are allowed "fuel" (not "coal") which they can take as coal, or coke, or gas, or electricity, or as partly one and partly another of these four forms of fuel; and they best serve the national interests, as well as their own, when they take it in gas or coke.

BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 116,346 (June 7, 1917).—John Woolcock, 42 Albemarle Street, London, W., Engineer.—This invention consists in a method of constructing floors from a series of beams each formed of a row of blocks tied together by longitudinal reinforcing rods to form a self-supporting beam prior to being placed in position in a floor, in which previously formed transverse reinforcing spacing members engage and accurately position the two side rods of each beam independently of subsequent attachment to adjacent beams and ensure an unobstructed flow of the grouting concrete and complete encasement of the reinforcement. Fig. 1 is a longitudinal perspective view of one beam, part being omitted. Fig. 2 is a longitudinal section in two parts through one of the channels between the beams with the metal reinforcement in position and the central part of the beam broken away. Figs. 3 and 4 show one of the separate blocks in side and elevation. Figs. 5 and 6 are a side and end view of a ferro-concrete pressure distributing slab for the ends of the beams. Fig. 7 is a view looking at the end of the floor and showing a portion of the ends of two adjacent beams. Figs. 8 and 9 show one of the transverse tie-link reinforcements. Fig. 10 is an enlarged view of the end of one of the main tension members. *a* is the concrete block. Such blocks may be formed of ground furnace clinker, and are provided with abutting lower edges or flanges a^1 upon their side faces. The top of the block is thicker than the sides, and shoulders a^2 are formed in the upper portion of the side faces. On one end face of each block are formed grooves a^3 a^4 for receiving the transverse spacing links and allowing these to be properly grouted. A complete beam, as shown in figs. 1 and 2, is formed from any suitable number of blocks *a* placed between two end-pressure distributing slabs *b* (figs. 5 and 6), and held together by tension members *c*

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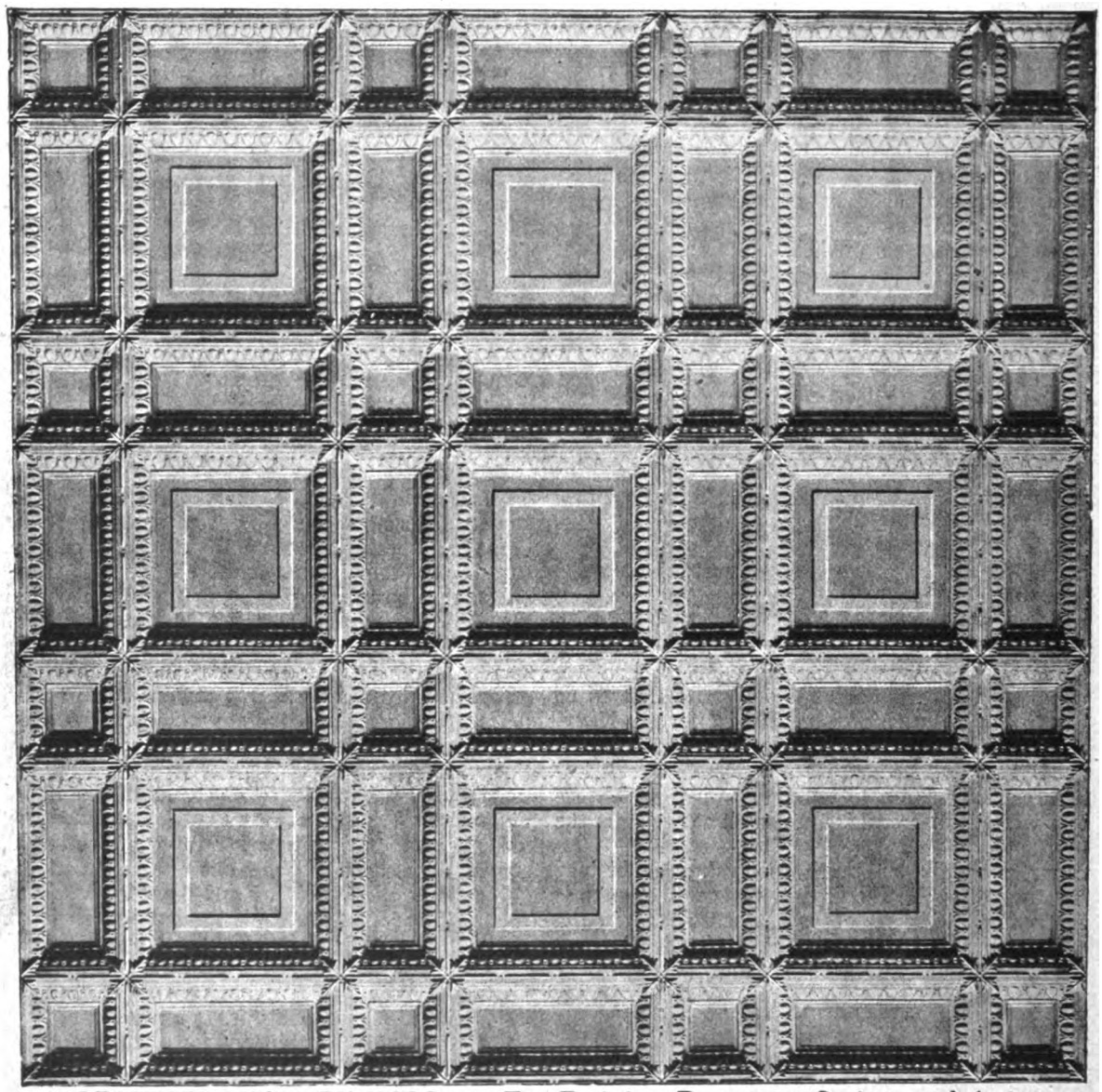
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placed one upon each side of the row of blocks in the angle of the abutting flanges a^1 and passing through the notches or slots b^1 in the slabs b. The slabs b are provided with cavities b^2 near the centre of their upper edge for receiving the lifting hooks by means of which the beams are placed in position. A beam is constructed upon a suitable support, such as the end wall of the space which is to be floored over, or, as the work proceeds, upon the last positioned beam of the floor. The tension members c, as shown in fig. 10, are provided with plus threads c^1 so that, in the event of the length of the rod being in excess of that required, a nut such as c^2, which has been screwed up to the end of the thread, will act merely as a washer and may be reinforced by a second nut c^3 following it upon the thread. The transverse links d are formed, as shown in figs. 8 and 9, of a substantially horizontal portion d^1 bent at each end into a ring d^2, which, after passing again under the horizontal part, is doubled back and carried up upon each side as upright pieces d^3. A number of transverse links d equal to one less than the number of blocks required for the beam are threaded upon a pair of tension members c,

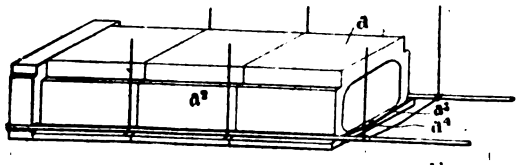


Fig.1.

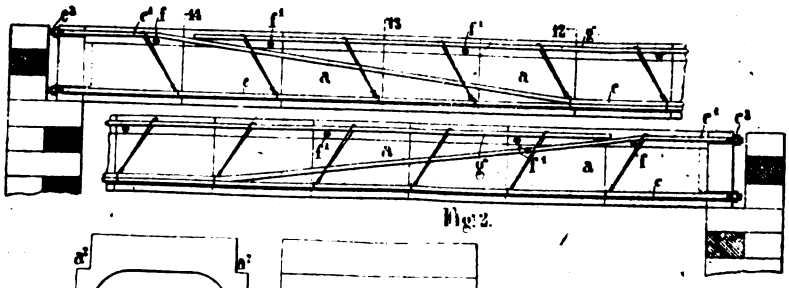


Fig.2.

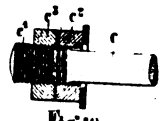


Fig.10.

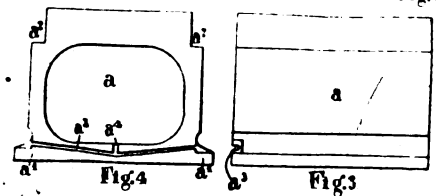


Fig.4. Fig.3.

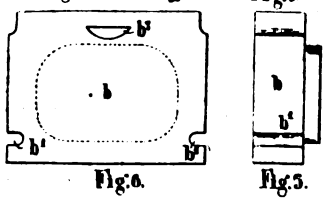


Fig.6. Fig.5.

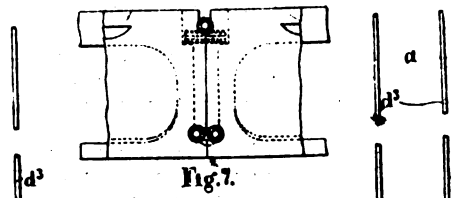


Fig.7.

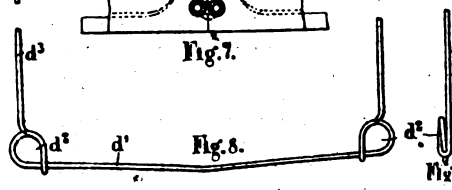


Fig.8. Fig.9

which are then placed in position, while the blocks a are assembled from the centre towards each end, a transverse link d being inserted in the groove a^3 at the end of each block before the next block is placed in position. When the whole of the blocks are in position and the two pressure distributing slabs b, the nuts at the ends of the tension members are tightened and the beam is thus given sufficient rigidity for it to be moved from the support and placed in its proper position on the span. Beneath the upper ends e^1 of the bent-up tension member e are placed upon the end blocks supporting rollers f, and the bent-up members may then be tensioned by nuts e^3 outside the pressure distributing slabs b to the extent necessary to adjust the alignment of any of the beams which may sag below the normal level of the floor. As soon as the bent-up tension member e is properly positioned, a compression reinforcement member g is placed upon a series of supporting rollers f^1 so as to occupy all of the upper part of the channel left between the ends e^1 of the bent-up tension member. The whole of the upright portions d^3 of the transverse links d are then bent over the reinforcement in the top of the channel. When the reinforcement is completed, the channels between the blocks are filled with grouting, which is enabled to completely surround the whole of the reinforcement and pass along the grooves a^3 in the ends of the blocks, and thus firmly embed the transverse links d. The short vertical portion of groove a^4 (fig. 4) allows of the escape of any air which might tend to prevent the concrete penetrating into these grooves.—June 19, 1918.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 107,768 (July 3, 1917.—Dated under International Convention, April 27, 1916).—Rohrbogenwerk G.m.b.H., Hamburg.—A method and apparatus for manufacturing pipe bends, serpentines, and the like.

116,906 (March 30, 1917).—H. F. Wheeler, The Haven, South Woodham, Essex.—Means for securing shades to the holders of electric lamps.

116,953 (July 17, 1917).—Ada Nelson, 26 Vauxhall Road, Preston, Lancs.—Apparatus for heating water and for cooking.

116,963 (August 11, 1917).—T. H. Austin, 37 Schubert Road, Putney, S.W.—Hut or building applicable as a shelter for soldiers and or other purposes.

116,971 (Jan. 26, 1918).—T. W. Davenport, 44 Cleveland Gardens, Barnes, S.W.13, and Frederick Foster, 9 Lindore Road, Clapham Common, S.W. 11.—Method of obtaining siphonic action in flushing cisterns and the like.

117,002 (Oct. 17, 1917).—H. C. Gover, Elmbank, London Road, Norbury, S.W. 16.—Apparatus for moistening and treating air in connection with a gas or other fire stove.

117,040 (Jan. 11, 1918).—Matthew Halkes, Dunston, Lincoln.—Kilns and chambers for drying timber.

117,238 (Feb. 27, 1918).—J. W. Wilson, 23-25 Church Street, Sheffield.—Domestic fireplaces.

116,822 (Sept. 27, 1917).—J. S. Stanyon, Brookside, Evington Road, Leicester.—Compartmental structures.

117,206 (Nov. 19, 1917).—E. K. Irwin, 32 Landor Road, Stockwell, S.W., tap maker.—Water taps.

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117,047 (Feb. 13, 1918).—W. P. and W. H. Edwards and William Mollart, Park Lane, Fenton, Stoke-on-Trent, Staffs.—Glaze used in the manufacture of pottery and like articles.

116, 874 (March 28, 1918).—R. & J. Dempster, Ltd., and H. S. Knight, Gas Plant Works, Oldham Road, Manchester.—Spark, dust, and cinder arresters for chimneys.

116,863 (Feb. 4, 1918).—T. D. Meredith, 147 Abbeville Road, Clapham, S.W.—Clip for stopping leakage in damaged pipes.

Any of the above specifications may be obtained from J. D. Roots.

VARIETIES.

The proposed additions to Bridlington Harbour are estimated to cost a sum of about £40,000.

The death took place recently of Mr. John Flatman, architect, of Newmarket, in his seventy-fifth year.

Mr. W. M. Gray, builder and contractor, Oxford, has been added to the Commission of the Peace for that city.

Mr. Taliesin Rees, architect and surveyor, has been added to the Commission of Peace for the borough of Birkenhead.

The late Mr. Peter Denny, engineer, Dumbarton, whose will has been proved at £51,458, has left the sum of £5,000 to St. Augustine's Episcopal Church, Dumbarton.

An imposing stone column surmounted by a cross has been erected at Royston to the memory of the local men who have fallen in the war.

Mr. Wilfred E. Kelly, Lieutenant R.N.V.R., a member of the Society of Architects, has been mentioned in dispatches for distinguished service on the night of April 22 and 23 last during the attack on Zeebrugge-Ostende.

The disastrous fire which broke out last week at the Blaenavon Provident and Industrial Co-operative Society's premises caused damage estimated at the amount of £25,000.

The Elland Urban District Council have decided to apply to the Local Government Board for sanction to proceed with a housing and town-planning scheme with reference to certain lands in the urban district.

The Birmingham Education Committee have sanctioned the erection of a workshop on land adjoining the municipal technical school, Suffolk Street, for the training of disabled sailors and soldiers.

The Preston Town Council have approved the purchase of Chestnut House, Ribbleton, for the purpose of a hospital for the treatment of advanced cases of tuberculosis, for the sum of £1,800.

Mr. John Robert Scott, wool merchant, Bailden, has been summoned at Otley and fined £1 with £5 5s. costs for erecting a building without giving notice to the Council surveyor.

At a meeting of the County Education Committee at Worcester on Saturday it was reported that the representatives of the city and county authorities had come to a provisional agreement as to the erection of a new secondary school for girls.

Extensive damage has been done by a fire which broke out on Sunday morning in the engine shop of Messrs. Geo. Clark, Ltd., Sunderland. The origin of the fire is unknown as no one was engaged in the place when the outbreak was discovered.

At a meeting of the Limerick City Housing Committee, over which the Mayor presided, it was decided to make arrangements for a sum of £800,000 for the purpose of erecting 2,000 cottages, 1,000 of the houses to be of four rooms, 600 of three rooms, and 400 of five rooms.

Mr. P. C. Cowan, engineering inspector of the Irish Local Government Board, on the housing question in Dublin, has submitted his report to the Chief Secretary. The report recommends the erection of sixteen thousand new houses at £400 each, £6,400,000; acquisition and reconstruction of 3,800 old tenement houses, £2,040,000 -total £8,440,000.

A garden village is to be created on the Broad Oaks estate, Sale. The scheme has been approved by the Urban District Council and the Local Government Board. The houses will be semi-detached, and the laying out and lighting of the roads will receive special consideration.

The Middleton Town Council have decided to apply to the Local Government Board for sanction to borrow £7,500 in connection with expenditure on new cable, plant, and alterations to be carried out at the electricity works for the conversion of the works into a transforming and distributing station to deal with a bulk supply of current from Manchester.

The death is announced of Mr. Joseph Henry Robinson, the founder and head of the East London and Globe Foundries Co., of High Street, Bromley, E., aged sixty-nine. For many years he took an active part in local affairs in the East End of London.

The Council of the Scottish Society of Artists have with regret accepted the resignation on account of ill-health of Mr. Robert H. Christie, the secretary, and have elected to fill the vacancy Mr. A. W. Lowe. Mr. Christie had been secretary for twenty-five years.

Sir Walter Armstrong died on Thursday, August 8. He was at one time a director of the National Gallery of Ireland. For many years he had been a writer and critic of art. The honour of knighthood was conferred upon him in 1899.

At the meeting last week of the Finance Committee of Aberdeen Town Council the question of the proposed Aberdeen war memorial was postponed to the next meeting. The proposal to be discussed is that the suggested memorial should take the form of a memorial court to be erected on a site adjacent to the Art Gallery.

A considerable amount of money has been spent on the renovation of Carnarvon Castle by the Government through H.M. Office of Works. It has been found that considerable damage is being caused by visitors, and the authorities are seriously thinking of withdrawing the privileges which have been enjoyed for so many years by the public in consequence of these acts.

According to "The Times" a marriage is shortly to take place between Captain Cathcart Wason, C.M.G., Royal Navy, and Mrs. Richardson, widow of the late Walter Richardson, and daughter of the late Mr. J. C. Edwards, of Trevor Hall, Llangollen. Mr. J. C. Edwards will be remembered as the pioneer of terra cotta, doing more than any other man to popularise the use of it as a building and decorative material.

Three big fires in one week-end have to be recorded: the largest was that which broke out on Sunday at Heaton, Newcastle-on-Tyne, when damage to the extent of over £150,000 was caused to the electric train sheds of the North-Eastern Railway. On Sunday morning another fire occurred at Chatham, when the premises of Messrs. Jasper & Sons, bakers and confectioners, in the High Street, were destroyed, the damage being to the extent of some thousands of pounds. On Saturday night the third fire, which caused damage estimated at about £10,000, took place at Earnock, a mining suburb of Hamilton, when twenty-four houses in a block of fifty were totally destroyed.

Reports from the various reinforced concrete shipyards in England, Scotland, and Ireland show that good progress is being made in the construction of 1,000-ton sea-going barges for the Admiralty Department of Merchant Shipbuilding. Vessels of this class are urgently required, and the programme of construction already authorised comprises barges and other vessels representing some 200,000 tons of shipping, and a capital outlay estimated at nearly £4,000,000, apart from the cost of land and shipyard plant. On the designs adopted the saving in steel is fully 70,000 tons on what would have been required for steel ships of the same carrying capacity. It is believed that a still larger saving will be effected when practical data become available as to the minimum proportion of reinforcement that may be employed with safety.

In his review of the national shipbuilding position in the House of Commons, Sir Eric Geddes paid a well-deserved tribute to the concrete system which has solved the building difficulty in countless undertakings for the Government since the beginning of the war. "On the Wye," he said, in dealing with the national shipyards, "we are building houses of an admirable but most economical type. I am assured by the engineer-in-charge that the system of concrete blocks employed is actually cheaper to-day than woodwork or corrugated iron huts." Concrete blocks and slabs, indeed, with our rapidly diminishing supplies of timber, bricks, and other materials, are coming to the front by leaps and bounds in every branch of structural war work, and must, of necessity, play a leading part in all schemes of reconstruction both at home and abroad. It is interesting to learn that the work referred to by Sir Eric Geddes is being carried out on the "Winget" system, the blocks and slabs of which are now being used for 80 to 90 per cent. of the present camps, hangars, and housing schemes, &c., as specified by the Admiralty, War Office, and other Government Departments of Great Britain and her Allies.

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THE
Architect and Contract Reporter.
FRIDAY, AUGUST 23, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

The Editor will be glad to receive from Architects in London and the Provinces results of Competitions and Tenders and other particulars of Works in progress in which they may be interested.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 1, after that date on payment of 4d.

CONTRACTS OPEN.

DUNDALK.—Aug. 27.—For painting about twenty sewer ventilating shafts throughout the town, for the Dundalk Urban District Council. Mr. M. Comerford, town clerk, Town Hall, Dundalk.

LONDON.—Aug. 29.—For repair and redecoration of exterior of public baths and wash-houses, Kennington Road, S.E., for Lambeth Borough Council. Mr. B. Penny, town clerk, Town Hall, Brixton Hill, S.W. 2.

MANCHESTER.—Aug. 27.—For painting the Crescent Road Institution, Crumpsall, for the Guardians of Manchester Union. Mr. A. J. Murgatroyd, architect, 23 Strutt Street, Manchester. Deposit 10*s*.

MITCHAM.—Sept. 5.—For painting and decorating the isolation hospital, Beddington Corner, near Mitcham Junction, for the Wandle Valley Joint Hospital Board. Mr. E. J. Gowen, clerk, Council Offices, Purley.

STROOD (KENT).—Aug. 27.—For painting external wood and iron work at the Guardians' institution at Strood, for the Guardians of Strood Union. Mr. G. E. Bond, 384 High Street, Rochester.

WALBOTTLE.—Aug. 24.—For painting exterior of fifty-eight houses at Walbottle; also for building a short-length brick wall at Westerhope, for the Newburn Urban District Council. Mr. T. Gregory, surveyor, Council Offices, Newburn-on-Tyne.

TENDERS.

GRATELY (HANTS).

For alterations at teachers' house, for the Education Committee of the Southampton County Council.

BOURNE & JENKINSON (*accepted*)	£114 15 6

NANTWICH.

For construction of about 140 yards of 9-in. sewer, with two manholes, in Pillory Street, Nantwich, for the Urban District Council. Mr. W. WILLIAMS, 26 Pepper Street, Nantwich, engineer and surveyor.

W. MULCASTER, Haslington, near Crewe (*accepted*)	£198 9 6

NORTHWICH.

For laying sewer from Dobell's Lane to the Crescent, for the Northwich Urban District Council.

S. HUTTON & Co. (*accepted*)	£703 2 9

OSSETT (YORKS).

For erection of shed at destructor works for the Corporation.

A. LOCKWOOD & SONS, Ossett (*accepted*)	£90 0 0

RISHWORTH (YORKS).

For the construction of reinforced concrete gauge basins and a small mass concrete dam in the township of Rishworth, near Halifax, for the Wakefield Corporation. Mr. C. C. SMITH, M.I.C.E., Town Hall, Wakefield, waterworks engineer.

J. M. FIRTH, Todmorden (*accepted*)	£5,941 0 9

STOCKTON.

For painting work at Ropner Park and recreation ground.

Accepted tenders.

CROFT & ROE (Ropner Park)	£116 15 0
ATKINSON & WINN (recreation ground)	112 10 0

WALES.

For construction of a channel near Nantribo, for the Urban District Council.

L. CLARK (*accepted*)	£25 0 0

WALTHAMSTOW.

For painting the exterior of the Forest Road schools for the Walthamstow Education Committee. H. PROSSER, M.S.A., architect to the committee.

J. & J. Dean, Walthamstow, E. 17	£212 0 0
Fuller & Son, Walthamstow E. 17	212 0 0
S. Blow, Ltd., Tower Hill, E. 1	194 0 0
J. SANDS, Walthamstow (*accepted*)	189 0 0

For painting the exterior of the Gamuel Road schools for the Walthamstow Education Committee. H. PROSSER, M.S.A., architect to the committee.

F. E. McBride, Walthamstow, E 17	£227 4 6
Fuller & Son, Walthamstow, E. 17	195 0 0
S. BLOW, LTD., Tower Hill, E. 1 (*accepted*)	115 0 0

For renovating the interior of the Pretoria Avenue Girls' and infants' schools, for the Walthamstow Education Committee. H. PROSSER, M.S.A., architect to the committee.

Fuller & Son, Walthamstow, E. 17	£198 0 0
J. Sands, Walthamstow, E. 17	160 0 0
S. BLOW, LTD., Tower Hill, E. 1 (*accepted*)	157 10 0

For providing and fixing a new boiler at the Chapel End infants' school, for the Walthamstow Education Committee. H. PROSSER, M.S.A., architect to the committee.

Body & Co., Wells Street, W. 1	£90 0 0
Watkin & Son, Wood Green, N. 22	87 10 0
Wontner-Smith, Gray & Co., Sun Street, E.C.	76 4 0
F. DAVIES, Leyton (*accepted*) (*a*) builders' work and covering to boiler included	74 0 0

For providing and fixing a new boiler at the Marsh Street boys' school for the Walthamstow Education Committee. H. PROSSER, M.S.A., architect to the committee.

Watkin & Son, Wood Green, N. 22	£89 0 0
J. D. BOYD & Co., Wells Street, W. 1 (*accepted*)	73 0 0

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VARIETIES.

The death has occurred at Brynmawr, Pennsylvania, of Mr. Chas. Herbert Scott, consulting engineer, of Gloucester.

The number of works which have been submitted for consideration in connection with the fifty-seventh annual exhibition of the Royal Glasgow Institute of Fine Arts is 1,350.

The death took place on Saturday after a brief illness of Mr. Edwin James Head, builder, Martock, at the age of sixty-eight.

The Uxbridge Rural Council have approved the plans for erection of a cottage at Wise Lane, West Drayton, and for a house at Riverside, West Drayton.

A larger and permanent shrine in memory of those who have fallen in this present war is to be erected in Hyde Park in place of the temporary one now standing.

Glasgow Art Collection has been added to by the presentation of a picture entitled "A Spate on the Dochart," by Sir Alfred East, R.A.

Mr. William David Morgan, M.S.A., of Pentre, Rhondda Valley, has lost his son by drowning at Porthcawl, where the family were visiting.

Mr. William Whytock, of Bentheads, Bannockburn, builder and contractor, has received news that his son, Private Duncan Whytock, of the Seaforth Highlanders, was killed in action on August 3.

The Committee of the Burton-on-Trent Corporation is submitting a housing scheme to provide 500 houses on garden-city lines to provide accommodation for workers in connection with the new factories opened in that district.

Mr. James H. Ash, architect and surveyor, informs us that he has been engaged to prepare the plans for forty-eight model cottages (in twelve blocks of four) proposed to be erected at Upton. Building operations will be commenced immediately at the close of the war.

It has been decided by the Edinburgh Town Council to apply to the Local Government Board for authority to prepare a town-planning scheme to include portions of the Broughton, Inverleith, Wardie, Granton, and Craigleith districts.

The scheme for the erection of a Lord Roberts' memorial workshop at Burnley for disabled soldiers and sailors has advanced another stage, a sub-committee having been appointed for the purpose of recommending a suitable site for the building.

The men engaged in the building trade at Taunton are on strike. The painters, masons, and carpenters have recently been granted an increase to 1*s.* per hour and the labourers in proportion, but a further advance of 12½ per cent. on the present wages is demanded.

The West Penwith Rural Council, before placing a scheme of housing before the Local Government Board, state that they must know more definitely what is likely to be the policy of the Government with regard to fostering the products of land and sea after the war, and that this view of the problem be presented to the Local Government Board.

On Thursday, the 15th inst., a town's meeting was held at the Town Hall, Flint, in support of the proposed cottage hospital for the borough. Messrs. Courtaulds, of Coventry and Flint, are presenting the building on condition that a sum is raised locally of £3,000 to form the nucleus of an endowment fund for the hospital.

Sir A. D. Steel-Maitland, M.P., representing the Board of Trade, formally opened on Monday the British Industries Fair at Glasgow. The Exhibition is being held in a new hall specially erected by the Glasgow Corporation; the whole of the available 100,000 square feet of space has been occupied.

The Wellington (Salop) Rural District Council have decided to submit plans for seventy-five workmen's houses for the approval of the Local Government Board. It is proposed to erect the houses in groups in selected parts of the rural district; the Urban District Council have decided on a scheme of their own.

"The Times" states that after calling at Athens and conferring with M. Venizelos and Lord Granville, British Minister, Mr. Wheatley, the representative of a British syndicate which has obtained a concession to drain the Struma Valley, arrived on Wednesday last at Salonika with a staff of civil engineers. Preliminary surveys will commence immediately.

The Ashton-under-Lyne Corporation have had under consideration the question of extending the tramways depôt in Mossley Road consequent on the acquisition of the Oldham, Ashton, and Hyde electric tramways, and the need for additional accommodation for cars at the shed, and have decided to purchase "Pennine House," Mossley Road, and a site adjoining the depôt, with a view to providing the necessary extension.

Councillor James Smith, chairman, presided at a meeting of the Newcastle Corporation Housing Committee when the question of the housing scheme for Walker was again considered. It was decided that Councillors Stableforth, Adams, Thwaits, Robinson, and Oates should prepare a report on the number of houses to be erected per acre, the types of dwellings, the question of "flats," the provision of open spaces and gardens for each house.

Our attention has been called to the fact that Messrs. Wolff & Sons' Royal Sovereign pencil has been manufactured in this country from the year 1815. A hundred years ago when an artist or architect wanted a good pencil he went to Elias Wolff personally and had his special pencils made. To-day he goes to his stationer if he wants the "Royal Sovereign pencil," and can get it in any grade to suit his requirements.

As a result of arbitration proceedings regarding the wages paid to men employed in the building trade in Bridgwater the following award has been made by the Committee on Production:—"Bricklayers, carpenters, plumbers, and painters shall receive an advance of 2*d.* per hour, making a total of 1*s.* per hour to bricklayers, carpenters, and plumbers, and 11*d.* an hour to painters. The labourers concerned shall receive an advance of 1½*d.* per hour, making a total of 9½*d.*"

We have received from the publishers, Messrs. Lindley Jones & Brother, a copy of the 1918 edition of their "Mercantile Year-Book and Directory of Exporters." The issue before us is the thirty-second annual issue. Mr. Walter Lindley Jones, the editor, in his preface, states that he had almost despaired of publication. With all available men serving with the exception of himself and sub-editor, and with the fact that he himself is voluntarily doing important Government work, the difficulties have been further greatly increased. Despite all this the issue is out, perhaps delayed, but from a perusal, up to that high standard to which the publication has attained.

At the monthly meeting of the Hebburn Urban District Council a letter was read from the Government employers of labour in the town drawing attention to the pressing need for accommodation. The established industries in the town had greatly expanded during the war and the question of further extensions was being seriously hampered by the great shortage of houses. It was imperative that a considerable number of houses should be erected at once. The Council agreed with the statements in the letter, and decided to forward copies to the Admiralty, Ministry of Munitions, and the Local Government Board with a request for immediate consideration as to the question of building.

"Jodon," writing to the "Glasgow Herald" on the Housing Problems and the Report of the Housing Commission to the Local Government Board for Scotland, points out that "Land is in many ways the most important factor in housing. Without a plentiful supply of cheap land and easy access to it house dwellers cannot get sufficient space, nor water, nor sunshine; they cannot even get sufficient air." And again—"The question of the land is fundamental. If nothing is done to make it possible either for individuals or for public authorities to obtain building land at more reasonable prices than hitherto housing reform will be paralysed at the outset." Even the proposals of the Commissioners did not include the radical remedy, but the Local Government Board in ignoring this "fundamental question" altogether seem to contemplate building houses in the air.

Canon Cruickshank was the principal speaker at a meeting held in Durham Town Hall last week in connection with the housing campaign, and stated that the site offered by the Dean and Chapter for building purposes was still available. A resolution was carried expressing deep regret that it is possible to find deplorable housing conditions in the city, and suggesting that a full survey should be made of the conditions prevailing in all dwellings or parts of dwellings and tenements let at rents of less than £20 annual value. Another resolution passed welcomed "the decision of the City Council to come into line with the majority of progressive local authorities throughout the kingdom," and expressed the opinion that the best course to adopt will be to secure separate sites at different points on the outskirts of the city, and with the least possible delay to prepare plans and estimates.

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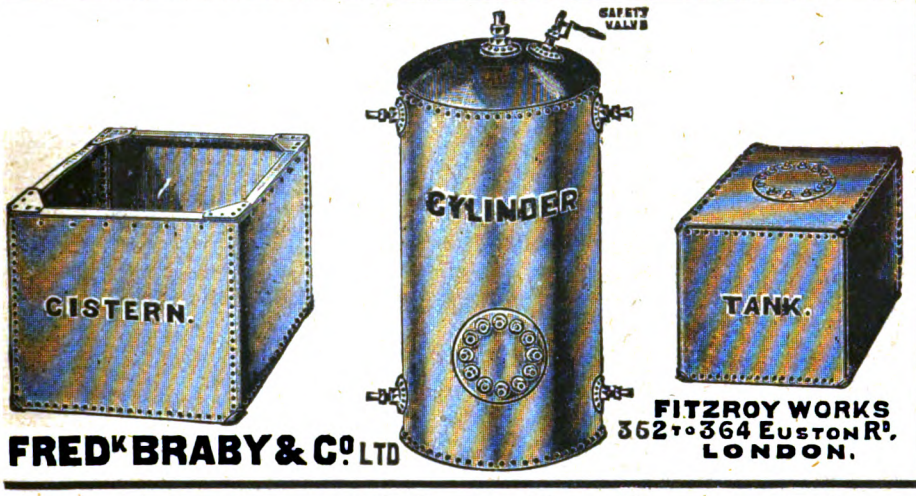
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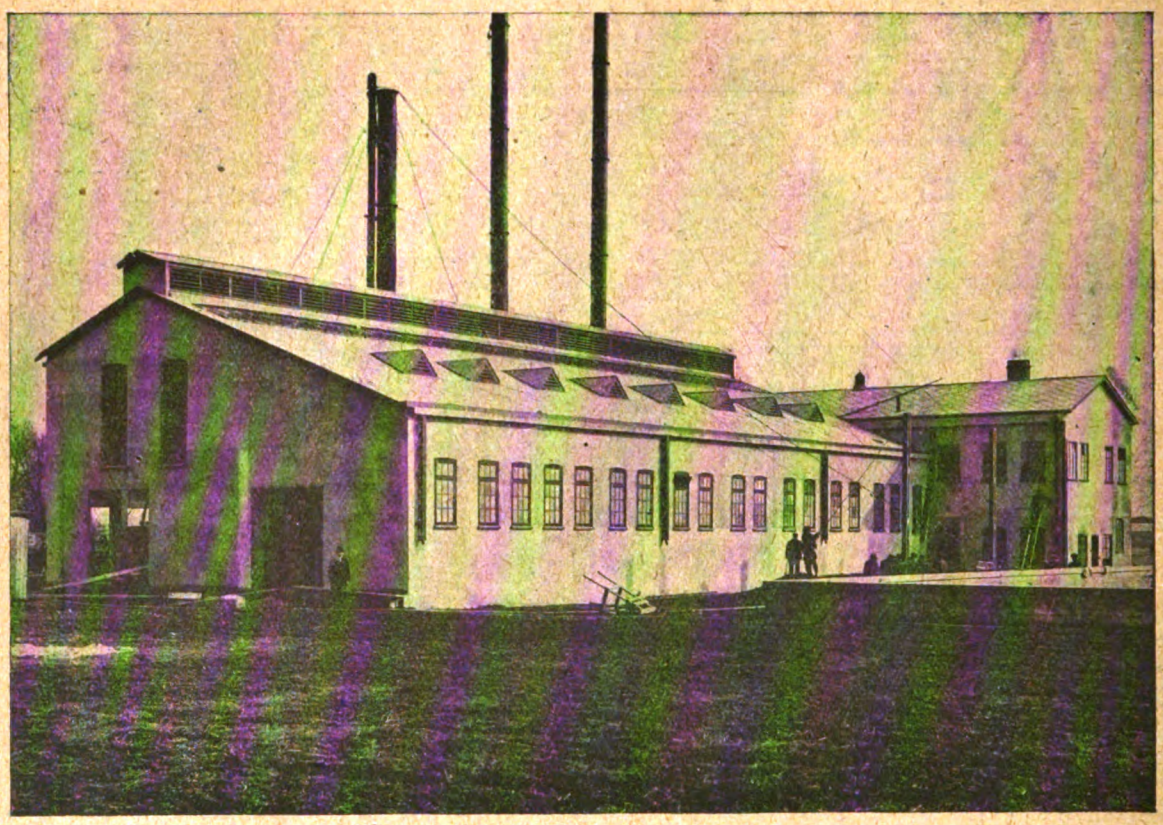
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FRIDAY, AUGUST 30, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

The Editor will be glad to receive from Architects in London and the Provinces results of Competitions and Tenders and other particulars of Works in progress in which they may be interested.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

We have upon our staff a very eminent Barrister, who will be glad to answer in the columns of this paper any legal question that may be of interest to our readers. All letters must be addressed "Legal Adviser," Office of "The Architect," Imperial Buildings, Ludgate Circus, London, E.C.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 1, after that date on payment of 4d.

CONTRACTS OPEN.

GODALMING.—Sept. 6.—For erection of two cottages, for the Godalming Town Council. Municipal Offices, Bridge Street, Godalming.

HARROGATE.—Sept. 4.—For painting wood and iron work outside the Royal Bath Hospital and Rawson Convalescent Home, Harrogate. Mr. B. Shaw, secretary.

PENTREBACH.—Sept. 4.—For rebuilding retaining wall and fence at Pentrebach, Pontypridd, for the Glamorgan County Council. Glamorgan County Hall, Cardiff.

PORTSLADE-BY-SEA.—Sept. 3.—For erection of premises to be used as a national kitchen. Mr. E. H. Kemp, clerk to the Council.

MITCHAM.—Sept. 5.—For painting and decorating the isolation hospital, Beddington Corner, near Mitcham Junction, for the Wandle Valley Joint Hospital Board. Mr. E. J. Gowen, clerk, Council Offices, Purley.

TENDERS.

CAPE TOWN.

For extension of electric lighting, for the City Council.
E. A. SHAW & Co. (*accepted*) . . . £276 0 0

CLOGHEEN.

For construction of waterworks.
BROWN, Clogheen (*accepted*) . . . £1,342 0 0

LYMINGTON.

For remedying defects at the second borehole at Ampress, for the Lymington Town Council.
ISLER & Co. (*accepted*) £120 10 0

A SERIOUS fire which caused damage estimated at between £20,000 and £25,000 is reported to have taken place at the works of Messrs. W. Canning & Co., dynamo manufacturers, of Snow Hill, Birmingham.

MESSRS. GIBBS & CANNING, LTD., the well-known architectural pottery manufacturers, of the Glascote Works, Tamworth, Staffordshire, have amalgamated their business with those of Mr. James Carroll, of Church Street, Deptford, S.E., and Messrs. F. Brayne & Co., Ltd., Bow Pottery, Bromley-by-Bow, E. The title of the firm will remain as Gibbs & Canning, Ltd. (incorporating Jas. Carroll and F. Brayne & Co.). The London address of the company will be 158 Church Street, Deptford, S.E. 8. Telephone 301 New Cross. Mr. James Carroll will take control at the London address, and has been appointed a managing director of the company.

THE "Liverpool Courier," in an article on the Property market and Housing Needs, states that the town-planners and their idealistic and expensive programme are a menace, and one which will have to be reckoned with. These gentlemen of Utopia still have the ear of the Government, chiefly because concerted action on the part of private enterprise has not materialised. One whose arguments on this subject are not unknown to readers of the "Courier," but who is now on urgent business in a khaki uniform, writes from France:—"When we return to find these self-satisfied town-planners comfortably installed as directors of housing, &c.—about which they know little or nothing—well, things will be lively on the home front, and we look to the 'Courier' to keep the flag of private enterprise flying until we do come back. . . . What we want in the first instance in housing are sound building construction, weather-proof walls and roofs, and good sanitation. This the practical man can give. Let him come first, and the artist and the idealist can follow on."

AN important series of conferences and discussions is announced by the Industrial Reconstruction Council to be held at 6 P.M. in the Hall of the Institute of Journalists at fortnightly intervals, alternately with the lectures at the Saddlers' Hall of which particulars have already been published. The first of these will be opened by Mr. Robert Wilson of the Ministry of Labour, on Tuesday, September 10, with an address on Works Committees. On September 24 the subject will be Trade Boards, and the speaker Mr. J. J. Mallon of the Anti-Sweating League. The other conferences will deal in turn with Interim Industrial Reconstruction Committees, the Place of Conciliation and Arbitration in the Whitley Scheme, Women in Industry, the Trade Union of the Future, Functions of Industrial Councils, and Restriction of Output, the opening address in each case being delivered by Mr. W. Henderson Pringle of the Ministry of Reconstruction, Mr. E. H. C. Wethered, Miss Lilian Dawson, Mr. George A. Isaacs of the National Society of Operative Printers and Assistants, Mr. E. McGegan of the Ministry of Labour, and Mr. Wilfrid Hill of Birmingham. No tickets will be issued, but all those who intend to be present are asked kindly to inform the Secretary, I.R.C., 2 and 4 Tudor Street, E.C. 4., who will be glad to send a full prospectus of the series on application.

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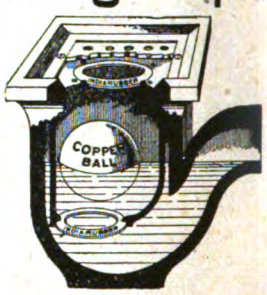
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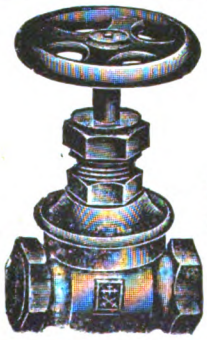
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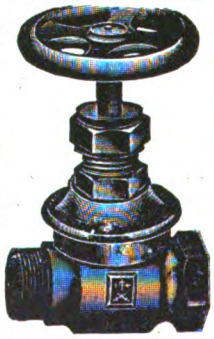
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INDUSTRIAL ADMINISTRATION

A group of firms engaged in the principal industries of the Manchester district have offered to the governing body of the Manchester College of Technology, the sum of £3,000, spread over a period of five years, towards the cost of establishing a new department of industrial management, and this has been accepted by the Manchester City Council. A lecturer will shortly be appointed for this period of five years, at a salary of £600, to conduct research in the subject of industrial management, to organise a new department, to lecture to members of the college and to the public, and to assist industrial concerns in the solution of management problems. To make doubly sure that the department shall keep in close touch with practice, a number of managers, directors, scientific experts and others who have had special experience or are responsible for important innovations, will be invited to deliver public lectures, being offered substantial fees, which will not only pay them for placing their knowledge at the disposal of their fellow-managers, but serve to encourage enterprise and experiment in matters connected with management. These lectures should be of assistance not only to future managers, but to those already in that position.

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Paint is not necessity;
That the building never painted
Lasts throughout eternity.

Paint protects, and paint defends us,
And the grave is soon the goal
Of the house that is not painted
As the seasons onward roll.

In enjoyment, not in sorrow,
We should go about our way;
Get to work and paint to-morrow—
Better still, begin to-day.

Time fleets on and buildings perish,
And our homes, built stout and strong,
Will decay and rot and moulder
If the paint's delayed too long.

In these days of toil and hustle,
Grab a paint brush and a can.
Don't let's be an old "back number"—
Save our buildings while we can.

Trust no future to be brighter
When we'll be more flush with cash;
Act *now*, in this glorious present,
Paint 'em up with vim and dash.

Homes of great men all remind us
We should paint our buildings o'er,
Though the painter leaves behind him
Footprints on our varnished floor.

Footprints of our friend the painter,
Stepping on the undried stain,
Left their trace. But what's the difference?
We can brush them out again.

Let us, then, be up and doing,
With a will that's strong, not faint;
Be achieving, be preserving,
Learn to labour and to *paint*!

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 108,159 (July 11, 1917.—Dated under International Convention July 19, 1916).—E. E. Littlefield, 302 Boston Block, Seattle, Washington, U.S.A.—Flushing apparatus.

117,089 (Feb. 8, 1917).—H. de Stefano, 67 O'Reilly Street, Havana, Cuba.—Electrical heating apparatus.

109,967 (Aug. 4, 1917.—Dated under International Convention, Sept. 28, 1916).—N. B. Costovici, 17 rue du Mont Blanc, Geneva.—Apparatus for rapid drawing of circles of given diameters.

111,087 (July 6, 1917.—Dated under International Convention, Nov. 6, 1916).—E. U. Romanet, 17 rue de l'Elysee, Grenoble, Isere, France.—Vehicles especially intended for removing sweepings, house refuse, and the like.

113,260 (July 4, 1917.—Dated under International Convention, Feb. 8, 1917).—J. H. Welsenaar, 40 Koninginneweg, Haarlem, Holland. Architect.—Burners for gas cookers and the like.

117,156 (July 26, 1917).—Wiggert Kooy, Huizen, North Holland, Architect.—Plant for the manufacture of concrete posts and blocks.

117,099 (May 3, 1917).—A. F. Berry, the Tricity House, 48 Oxford Street, London.—Electrical heating apparatus.

117,118 (July 3, 1917).—G. R. Strickle, Alton, Louisiana, N.T. Pool, Atlanta, Georgia; A. W. Stirling, Atlanta, Georgia, United States; and H. M. Lamb, Montreal, Canada.—Paints or coating compositions.

117,164 (Aug. 7, 1917).—Matthews & Yates, Ltd., Walter Yates, and E. W. Pougher, Cyclone Works, Swinton, near Manchester.—Ventilating, dust removing, and like systems.

117,273 (Sept. 27, 1916).—A. S. Twidle, Whakapara, Whangarei, Auckland, N.Z.—Claw hammer.

117,281 (May 26, 1917).—D. J. G. Miller, 54 Blackburn Grove, Bootle, and R. A. Lloyd, 11 Foxhill Street, Liverpool.—Grinding or crushing machines.

117,317 (July 23, 1917).—D. L. Irwin and The Ruberoid Co., Ltd., 81 Knightrider Street, E.C.—Construction of roofs, walls and the like.

117,318 (July 26, 1917).—A. C. Chew, Capt. R.A., 34 Egerton Gardens, Ealing, W. 13.—Slide rule.

117,323 (Aug. 2, 1917).—V. H. Majerus, 696 Woodview Terrace, Wyke; J. M. Errington, 2 Cunliffe Villas, Bradford, and Arthur Hammond, 16 Springwood Terrace, Bradford.—Material for the covering or jointing of pipes and the like.

117,335 (Aug. 29, 1917).—Herbert Coates, 33 Blenheim Place, Leeds.— Moulds for making blocks in terra-cotta, cement, artificial stone or the like.

117,344 (Sept. 18, 1917).—P. M. Stewart, 800 Riverside Drive, New York City, U.S.A.—Composite or reinforced concrete or the like bar or beam for use in the construction of buildings, bridges and the like.

117,434 (May 17, 1918).—Hirosuke Horiuchi, 194 Ryuko, Kosho, Taihoku, Taiwan, Japan.—Pipe couplings.

117,144 (July 12, 1917).—Middlesbro' Slag Co., Ltd., Stockton-on-Tees, Durham, and J. B. Hewitt, 13 Beechwood Avenue, Darlington.—Casting machine for casting slag or other massive bricks or blocks.

117,147 (July 16, 1917).—Walter Bennett, 12 Lyndhurst Street, Tunstall, Stoke-on-Trent, Stafford.—Kilns for firing earthenware, tiles, and other articles.

117,149 (July 19, 1917).—Newton Brooks, Fernside, Lightcliffe, brick manufacturer, and Fred Rodgers, North View, Hipperholme, Yorks, brick works manager.—Machinery for pressing bricks or the like.

117,171 (Aug. 17, 1917).—Automatic Telephone Manufacturing Co., Ltd., Milton Road, Edge Lane, Liverpool, and S. R. Smith, 14 Leigham Vale, Streatham, S.W.—Electric bells and the like.

117,193 (Oct. 29, 1917).—W. D. Ferguson, Mount Ava, Helens Bay, Down.—Firegrates of kitchen ranges.

117,197 (Nov. 2, 1917).—J. N. Kellett, The Bungalow, Scotchman Lane, Morley, near Leeds.—Roofing tiles or plates.

117,215 (Dec. 8, 1917).—J. T. Jacques, "The Motts," High Street, Ibstock, near Leicester.—Hollow building blocks.

Any of the above specifications may be obtained from J. D. Roots.

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VARIETIES.

The Wexford County Council are about to expend the sum of £500 on repairs to Wexford and New Ross Bridges.

The Federation of British Industries has invested a further £50,000 in National War Loan.

The question of a site for the new war museum is not settled; the one which meets with most approval is on ground adjoining the new premises of the London County Council.

The death took place last week of Mr. S. G. Collier, J.P., the head of the firm of S. & E. Collier, Ltd., brick and tile manufacturers, Reading.

A fire which broke out at the Bridgend Hide Stores, Glamorganshire, has caused damage which is estimated at £6,000.

Acting Lieut.-Col. Wm. B. Wyllie, R.G.A., is reported wounded in the right shoulder. Prior to the war he was in practice as an architect at Kirkcaldy and Kinghorn.

The Cork County Council have decided to expend an amount of one thousand guineas in flooring with concrete the sites of the proposed fish-curing sheds and the surface of the new additions on the Baltimore Pier.

The two huge sixteenth-century wooden doors of St. Wulfran's Church at Abbeville, France, have been removed to a place of safety. They were carved and erected at the church more than 350 years ago.

The death took place recently of Sir Walter Armstrong, a regular contributor to our contemporary "The Guardian." For over thirty years Sir Walter had written the Royal Academy Exhibition criticisms.

The alabaster memorial erected by the Earl of Rosebery to the memory of his son, Captain the Right Hon. Neil Primrose, M.P., M.C., was placed in position in St. Giles's Cathedral, Edinburgh, last week.

Mr. R. H. Christie, the late Secretary of the Scottish Society of Artists, has not long enjoyed his retirement, which we announced only last month He passed away last week.

In memory of Mr. T. Barclay Cockerton, auditor to the Local Government Board, a faculty has been granted for the erection of a stained-glass window in Holy Trinity Church, Brompton.

The Stirling Town Council have decided to acquire the lands and premises of Messrs. J. & W. Sommervile, nail manufacturers, Stirling, with a view to widening the streets St. Ninian's Road and Weaver Row.

A tablet erected by the officers, non-commissioned officers and men of the 130th Battery R.F.A., to the memory of Major F. W. Robinson, D.S.O., R.F.A., at Bagendon Church, Cirencester, was unveiled on Sunday last.

Mr. Arthur Earle, who has given very liberally to the Liverpool Cathedral, has offered to the city a large granite peace cross which is proposed to be erected at the end of the war, and it is suggested that it should be placed near the cathedral.

Messrs. Trehearne & Norman, architects, having had their offices at Regent House, Kingsway, commandeered by the Government, have taken temporary offices at 68 Lincoln's Inn Fields, W.C. 2. Their telephone number will be Holborn 896.

The Welshpool Town Council have adopted the report of the Housing Sub-Committee recommending that forty working-class dwellings should be erected in rural parts of the borough, and that a scheme should be prepared in readiness for the announcement of the Government proposals.

Mr. E. Thompson, builder, of Manor Road, South Norwood, who was on a visit to Brighton, and who had not done any swimming for the past sixteen years, pluckily saved the lives from drowning of two lads who got into difficulties bathing.

Miss Mary Riley, of Merrylee, Northwood, Middlesex, left £500 to the Rector of Hapton, Lancs, towards building a new church, for a memorial window in the chancel, and for a pulpit to the Hapton men who have fallen in the war.

The St. John Dry Dock and Shipbuilding Company have secured from the Canadian Department of Public Works the contract at an amount of two millions sterling for the construction of dry dock and ship repairing plant at Courtney Bay.

The death is announced of Mr. Charles Allman, of London Road, Woore, who, although passed seventy-three years of age at the time of his death, was actively engaged in building repairs including bricklaying, the dearth of labour in the district making it imperative that he should undertake all repairs.

The arrangements for the projected Scottish National War Memorial in Edinburgh are still under consideration. An announcement regarding the appointment of the Committee will in all probability be made at the beginning of the Parliamentary Session.

The death in action is reported of Second-Lieutenant Alec Moss, Manchester Regiment, who was only nineteen years of age. Lieutenant Moss was the second son of Mr. Charles Moss, West Bridgeford, a member of the well-known Loughborough building contractors, W. Moss & Sons, Ltd.

The special committee appointed by the Abercele Council to consider a housing scheme for the district has decided to provide for fifty houses, and the surveyor has been instructed to prepare rough plans for detached, semi-detached houses, also blocks of four houses, and submit them to the committee at their next meeting.

The Chorley Rural District Council have received a letter from the borough surveyor of Chorley that the Town Council proposed to prepare a town-planning scheme in respect of their district, including parts of the parishes of Coppull and Charnock Richard, and asking for the Rural Council's views as to their co-operation in the scheme.

At the last meeting of the Frodingham Urban District Council plans were approved for a first instalment of 199 houses to be erected at New Brumby for the Redbourne Hill Iron and Coal Company, Ltd. Plans were also approved for a new temporary hospital (twelve beds) to be built opposite the cottage hospital.

An offer made by Mr. C. H. Pinson, of Willenhall, recently to give an additional £50 toward the extensive development scheme to be carried out in the town after the war, if ten others would do likewise, has been taken up, and the amount required promised. The total of the promises is now £6,000. Forty-two acres of the land have been acquired, and £1,200 has been invested in War Loan, and it is hoped the proceeds will be utilised for the purpose of fencing.

At the last meeting of the Towcester Rural District Council a letter was read from Messrs. Groom & Tattersall asking the Council to consider the erection of workmen's dwellings, which would be of great convenience to the workpeople, and would prove of great benefit to the district. Mr. T. S. Stops strongly expressed the opinion that such matters should be left till after the war. Mr. G. E. Groom pointed out that the scheme was greatly encouraged by the Government.

A commencement has been made in carrying out the housing scheme at Wragley. Three building firms are working together under the title of Associated Lincoln Builders, representing Messrs. Wright & Son, Messrs. S. & R. Horton, and Messrs. Pattinson & Son. A commencement has been made by getting out the foundations of between thirty and forty houses, and various temporary offices have been erected on the estate. Authority has been granted for the erection of 200 houses as a commencement.

£10,000 is proposed to be spent in improving facilities for the landing and handling of fish at Reenard Point, Valencia Harbour, where the fish industry has increased enormously in recent years. The Development Commissioners have agreed to grant £6,750 on condition that the Congested Districts Board, Kerry County Council, and G. S. and W. Railway provide the balance. A Special Committee recommend the Kerry County Council to guarantee a sum not exceeding £1,500.

The Dalziel new High School, Motherwell, which has been erected at a cost of £36,000 from the designs of Mr. S. B. Russell, F.R.I.B.A., has been formally opened by Mr. J. B. Allan, chairman of the Board. Mr. Allan stated that architects who had inspected the school had described it as the finest and best-designed school in the country. It had been opened to prepare students for the University, and it was the ambition of the School Board to make the new school second to none in its suitability to provide instruction required by all students preparing for a University training in professional, commercial, and technical subjects.

On Thursday, August 22, an interesting paper prepared by Mr. A. Newlands, engineer to the Highland Railway, was read at the British Scientific Products Exhibition at King's College, London, entitled "Our Neglected Water-power." The writer pointed out that at present only 8.8 per cent. of our water-power was used, equalling 1.6 per cent. of the total mechanical power of the country, whereas there was enough power unused to bring the proportion up to 10 per cent. This would result in a saving of seven million tons of coal a year and provide employment for at least two million workers. Water-power would be of great value in country districts, where industrial energy could be recreated, or where it had never existed, and the economic redemption of Ireland might be within reach if her water-power were used.

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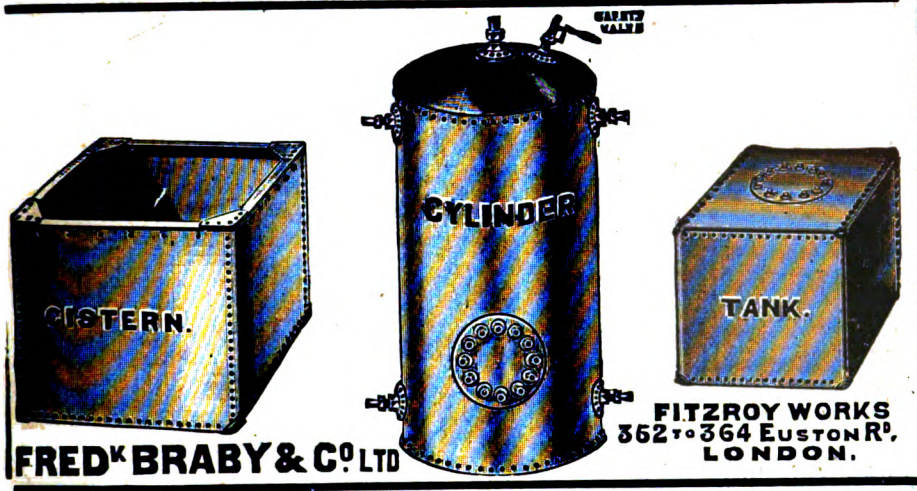
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FRIDAY, SEPTEMBER 6, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

The Editor will be glad to receive from Architects in London and the Provinces results of Competitions and Tenders and other particulars of Works in progress in which they may be interested.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

We have upon our staff a very eminent Barrister, who will be glad to answer in the columns of this paper any legal question that may be of interest to our readers. All letters must be addressed "Legal Adviser," Office of "The Architect," Imperial Buildings, Ludgate Circus, London, E.C.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 14, after that date on payment of 4d.

CONTRACTS OPEN.

DERBY.—For excavating and preparing ground for motor weighbridge, together with erection of small office building in connection therewith, for the Guardians of Derby Union. Clerk to the Guardians, Poor-Law Offices, Derby.

GODALMING.—Sept. 6.—For erection of two cottages, for the Godalming Town Council. Municipal Offices, Bridge Street, Godalming.

LUTON.—For erection of extensions to the generating-station buildings, for the Corporation. Electrical Engineer, St. Mary's Road, Luton.

ROTHERHAM.—Sept. 7.—For building, constructional steel and iron work required in the erection of a cold storage, for the Corporation. Mr. J. Platts, High Street, Rotherham.

SWINDON.—Sept. 16.—For painting the convalescent wards at the isolation hospital, for the Swindon and District Hospital Board. Mr. J. McGregor Johnson, clerk, Swindon.

TEHIDY (CORNWALL).—Sept. 16.—For erection of a pavilion at Tehidy Sanatorium, for the Tuberculosis Committee of the Cornwall County Council. Mr. E. H. Crispin, architect, Truro.

TENDERS.

BURY ST. EDMUNDS.

For painting and distempering the Feoffment boys' school, College Street, and St. Mary's girls' and infants' schools, for the Bury Education Authority.

R. LOFTS, Angel Hill (*accepted*) . . . £34 18 0

NUNEATON.

For supply of cast-iron pipes and specials, for the Town Council.

STANTON IRONWORKS CO., LTD. (*accepted*), £13 10*s.* and £21 per ton respectively.

STROOD (KENT).

For painting wood and iron work at the Guardians' institution at Strood, for the Guardians.

W. J. PARKS, LTD. (*accepted*) . . . £249 0 0

TIVERTON.

For repairs to the workhouse, for the Guardians.

R. GRATER (*accepted*) £33 0 0

A SCHEME is being prepared for the extension of the Corbett Hospital, Stourbridge.

THE Norton Rural Council, Yorks., have decided to appoint an architect in connection with a housing scheme for that district.

THE Southampton Education authorities propose to convert the Dolphin Hotel at Petersfield into a secondary school.

MESSRS. GRAHAM & HILL, architects, 6 Eldon Square, Newcastle-on-Tyne, have prepared the designs for a number of houses to be built at Blyth.

THE death took place on Friday last, at his residence, Roman Lodge, Alexandra Road, Lowestoft, of Mr. Arthur Bidwell, builder and contractor.

AT the monthly meeting of the Bridlington Rural Council the clerk reported that he had forwarded to the Local Government Board the approved scheme for the erection of forty-four cottages.

AT Monday's meeting of the Middlesbro' Education Committee the Mayor reported the receipt of an amount between £70,000 and £80,000 promised by leading firms towards the cost of erecting the proposed Constantine Technical College.

ON Friday, August 30, at a meeting of the Building Trades Federation, held in the Trade Hall, Northampton, a presentation was made of an illuminated address and a wallet containing £30, in recognition of his services during the past two years, to Mr. A. Boyd, the Federation Organiser. Mr. Bolton, President of the Federation, presided.

THE Manchester Corporation Buildings Committee has approved plans for additions to laboratory at works in Delaunay Road Electric Generating Station, first-aid station in Waterloo Road, and offices at works in Crumpsall Vale, Crumpsall, and for engine shop and works in Crossley Street, Gorton. Plans have also been passed for additions to factory in Ten Acre Lane and to soap works in Holland Street, Newton Heath.

THE report of the city engineer and surveyor (Mr. H. E. Stilgoe) for the year ended March 31, states that the most important work carried out in Birmingham was the preparation of a scheme for widening all the main arterial roads to 110 ft. or 120 ft., and for widening 43 miles of radial main roads and the construction of seven miles of new roads. This is "the greatest and most complete scheme (the report states) of arterial road improvement ever planned before and adopted by any corporation in this country." A scheme for the reconstruction of the Hockley main sewer, estimated to cost £300,000, was also approved. The length of road tar-sprayed was 306 miles, compared with 247 in 1916. Buildings completed numbered 819, as compared with 951 in 1916-17; 663 plans were deposited for the construction of new buildings, as compared with 1,120 the previous year.

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— whether you be owner, director, shareholder, consultant, manager, architect, or in any other way connected with an industrial or commercial concern —rests the responsibility of seeing that the consumption of fuel in that undertaking is regulated as science and patriotism demand.

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That is not a wild statement, as we shall be delighted to demonstrate by concrete instances to anyone who writes to us for particulars.

There is no time to lose: we have already delayed reform too long. Reform there must be; and it is the duty of every British professional and business man to make himself acquainted with the true facts of the fuel problem, than which none other has a more direct bearing on the future of this Empire.

Full information and copies of the "Industrial Efficieincy" numbers of "A Thousand and One Uses for Gas" can be obtained on application.

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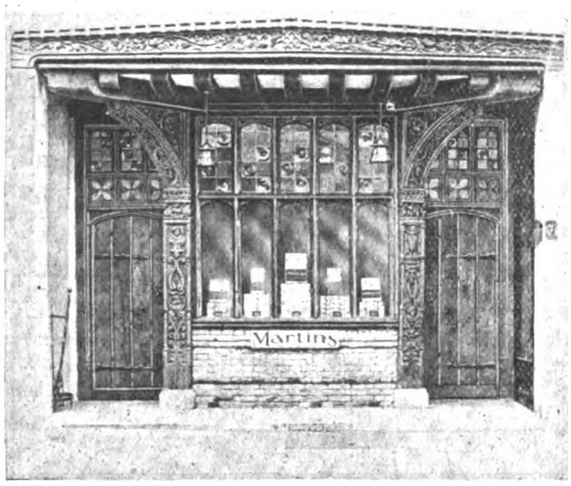
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MESSRS. MARTIN'S NEW SHOP FRONT.

MESSRS. MARTIN, the well-known tobacconists, have done much in the direction of promoting careful study and attention to the subject of the design of shop fronts and fittings, and if we feel at times that they disregard the general design of the buildings of which their shops form a part, we must give them credit for the attention paid by them to shops and shop fittings. The new front just completed in 17 Coventry Street, opposite the top of the Haymarket, is a case in point.

As will be seen from the accompanying illustration, it is East Anglian in character. The main lintel and one corner-post were brought from a dilapidated old house



dating from 1485, in East Suffolk. The other corner-post had to be copied, and this has been done in a manner which shows most skilful craftsmanship, so much so that a well-known expert in antique work spent three-quarters of an hour in examining the two corner-posts to find out which was the old and which was the new, and finally gave his decision in favour of the wrong one.

While it is questionable whether we want fragments of old timber work introduced into the midst of modern London, we feel that the front itself is pleasing in character, and are glad that Messrs. Martin are wise enough to employ professional skill instead of relying on stock commercial designs.

THE KING'S FUND FOR THE DISABLED.

WE are asked to call attention to the enclosed appeal:—

His Majesty the King has been graciously pleased to give not only his name, but also the magnificent sum of £78,000 to the Fund which was recently inaugurated to assist disabled officers and men of the Navy, Army and Air Force to become useful members of the community again.

We, the Trustees of the Fund, for whom I sign as Chairman, appeal to the humanity, the gratitude of every one of your readers, man, woman, and child, for a subscription which will help to find a new place in civil life for officers and men of His Majesty's Forces disabled in the war, and for the widows and children of officers and men who have given their lives for us.

"Why doesn't the Government do that?" some readers will ask.

Briefly, a State Pension scale must be hard and fast. Outside that scale there is a great human field which the King's Fund can cover, in which the officer, the man, or the dependent can be put on his or her feet, and given a sound re-establishment in civil life.

A State scheme must be a classification according to the type; the King's Fund passes beyond classification, and acts, not as a public official, but as a private friend.

The present facts are:—We are receiving 600 applications a week. 2,500 cases have been dealt with thus far. Where the officer or man has been trained by the Ministry of Pensions, or where there is a business given up for war service, which he can restart, an adequate grant can be made.

The Fund is a monument of gratitude.

It will cheer our gallant fighters to see that monument rising to £3,000,000—the amount aimed at.

So let us, therefore, have the money—and quickly. Urgent cases are waiting.

The King leads off with his great gift of £78,000. Who will follow the King's lead?

Contributions should be sent to the King's Fund for the Disabled, Westminster House, Millbank, S.W. 1. All cheques and postal orders should be crossed.

JOHN HODGE, Chairman.

OPENINGS FOR TRADE.

FROM INFORMATION FROM THE BOARD OF TRADE.

A LOAN of £58,600 is proposed by the Municipality of King William's Town, in the Cape Province, for a sewerage scheme and the duplication of certain water supply mains.

Estimates for this scheme are given in the "Cape of Good Hope Official Gazette" of July 5. They include £9,570 for a sewage farm, £29,930 for sewers, and £13,200 for duplication of the 10-inch water supply main.

The Government of the Province of Alberta have passed an Act providing for the establishment of municipal hospitals throughout the Province. In order to carry out the provisions of the Act, the Province is to be divided into convenient divisions to meet with the local requirements in each case.

The Imperial Trade Correspondent at Calgary states that already various districts have arranged for the establishment of these hospitals, and that the lead thus given by Alberta may possibly be followed by the other Prairie Provinces.

In view of the probable development and extension of these hospitals throughout Canada, British manufacturers of hospital equipment are advised by the Imperial Trade Correspondent to be prepared for trade openings in this market.

THE late Mr. William Richardson, ironfounder, of Mansfield, left estate valued at £27,561.

MR. PETER MOORE, of Rawtenstall, builder and contractor, left estate valued at £11,425.

THE Portsmouth Town Council have decided to secure an option of purchase of 500 acres of land on the southern slopes of Portsdown Hill, about three miles out of the town, for after-war housing facilities.

THE death is announced of Dr. Edwin Freshfield, F.S.A., the head of the firm of Freshfields, solicitors to the Bank of England, in his eighty-sixth year. Dr. Freshfield had an intimate knowledge of the East, which fitted him for his presidency of the Byzantine Research Fund, and enabled him to speak with some authority on questions relating to Byzantine art and architecture.

THE Director of the National Gallery states, in his annual report, that in connection with a bequest of modern foreign pictures to the trustees by the late Sir Hugh Lane, an offer from a generous donor, who wishes at present to be anonymous, to build a gallery for modern foreign art on part of the site reserved behind the gallery at Millbank has been accepted. The gallery will be built as soon as circumstances permit.

THE Labour Housing Association held a conference on Saturday at Derby. Mr. J. W. Ogden (chairman of the Parliamentary Committee of the Trades Union Congress) presided. He urged the requirements of an increasing population, and said the land question was closely connected with that of housing. Trade unionism was very properly associating itself with that subject. Resolutions were adopted asking for State loans free of interest, minimum house accommodation, and compulsory acquisition of land. The conference also declared against State assistance to private enterprise, and asked for a resumption of municipal elections.

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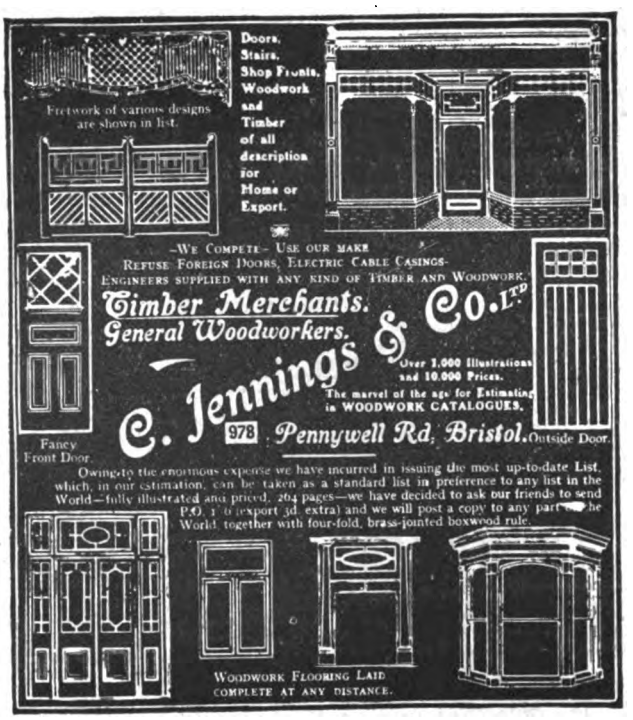
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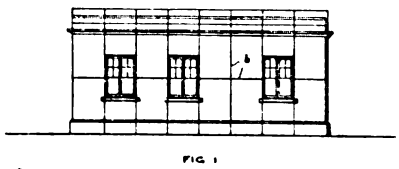
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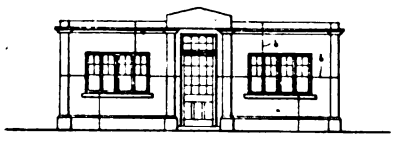
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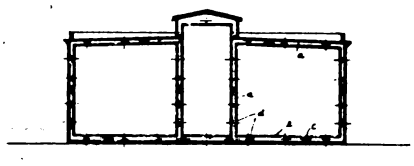
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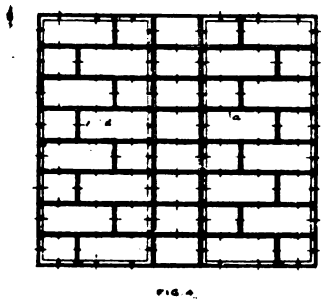
The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

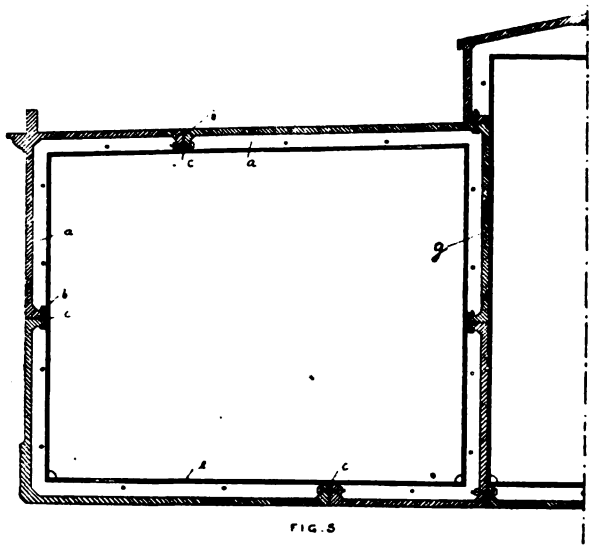
No. 117,233 (Feb. 12, 1918).—F. C. C. Rings, 58 Victoria Street, Westminster, S.W., civil engineer.—The construction in situ of cottages and the like in reinforced concrete necessitates double shuttering. In this invention such structures are erected without centering by casting the component parts beforehand, so that each forms part of a wall and floor or wall and roof, and assembling them on the site by simply bolting the respective sections together, thus ensuring rapidity of erection, a great saving in cost and supplying a perfectly dry and seasoned building ready for immediate occupation. Fig. 1 illustrates a side view of a typical cottage built on this system, fig. 2 a front elevation, fig. 3 a cross-section, fig. 4 a plan, fig. 5 enlarged cross section and fig. 6 enlarged transverse section. The sectional parts, each of which are combined parts of floor and wall or roof and wall of the cottage, are of channel shape with rabbeted flanges and are cast beforehand, the sections and particularly the ribs *a* being reinforced to resist the stresses in the usual way. The sections are made of a convenient width, say about three feet, and the composition of the concrete should be fairly rich or a waterproofing compound added to the mixture to ensure water tightness. A concrete bed under the whole is not required as the load is evenly distributed owing to the nature of the design. The ground is simply levelled and the cottage erected thereon. The various sections are placed side by side and strips of bitumen *b*, or other suitable material, are inserted on the outer side of the joint, wooden fillets *c* being placed between the inner sides of the joints and the whole tightened up by means of the bolts *d*. Floor boards *e* are nailed to the fillets c^1 in floor, and fibrous plaster slabs *g*, asbestos sheets or other suitable material to the fillets *c* in walls and ceiling of cottage. The complete building then gives a hollow wall, waterproof outside and plastered inside, the combination securing absence of condensation and ensuring comfort. Fig. 6 illustrates a window opening, and it will be observed that no lintels are required, the tendency of the window to drop being counteracted by the bolts. It will be appreciated that the same system may be applied to buildings of more than one storey, the floor of the upper storey being secured to the ceiling of the lower storey by means of similar bolts as shown, and the measurements and reinforcements of the lower sections being made proportionately stronger.—July 17, 1918.

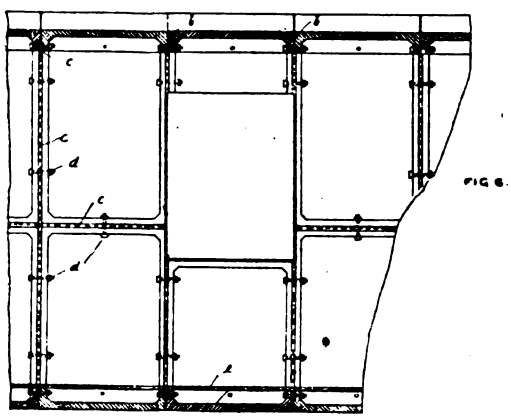

FIG. 1


FIG. 2


FIG. 3


FIG. 4


FIG. 5


FIG. 6

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 110,155 (Aug. 23, 1917).—Dated under International Convention Oct. 4, 1916).—J. E. Kiefer, 13 Avenue de la Harpe, Lausanne, Switzerland.—Bricks or building blocks.

117,221, 117,222, and 117,223 (Jan. 3, 1918).—W. J. Warner and W. N. Matthews & Bro., Inc., 3722 Forest Park Boulevard, St. Louis, Miss., U.S.A.—Water heater.

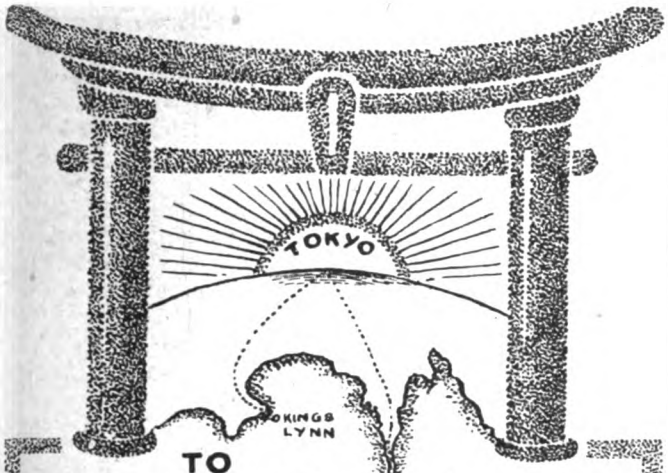
117,225 (Jan. 7, 1918).—Arthur Lissaman, 67 Franciscan Road, Tooting Bec Common, S.W. 17.—Cavity or hollow blocks or bricks and walls made therewith.

117,233 (Feb. 12, 1918).—F. C. C. Rings, 58 Victoria Street, Westminster, S.W.—Sectional reinforced concrete cottages.

117,142 (July 11, 1917).—Walter Wright, 525 Croydon Road, Beckenham, Kent.—Walls for buildings (not subaqueous).

117,504 (July 25, 1917).—W. J. Stewart, 42 Albemarle Street, W. 1.—Concrete and the like.

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110,535 (May 18, 1917).—Det Norske Aktieselskab for Elektrokemisk Industri, Norsk Industri-Hypotekbank, Bygdo Alle 1, Christiania.—Manufacture of white or like coloured pigments.

117,471 (May 5, 1917).—A. P. Florence, "Scotston," 15 Manor Court Road, Hanwell, W. 7.—Domestic ranges.

117,473 (June 13, 1917).—T. H. Rochford, 12 Winetavern Street, Dublin.—Manhole covers and frames for sewers, inspection chambers and the like.

117,492 (July 17, 1917).—J. E. Pannier, Norville, near Arpajon, Seine and Oise, France.—Glazing joint for glazed roofs, walls and the like.

117,499 (July 20, 1917).—Simplex Conduits, Ltd., and L. M. Waterhouse, 113 Charing Cross Road, London.—Electric radiators.

117,530 (Sept. 7, 1917).—Archibald Bennett, 63 Arthur Street, Dunedin, and T. H. Reid, 515 Cargill Road, South Dunedin.—Roller blinds.

117,541 (Oct. 5, 1917).—F. V. Bornand, 37 Bennett's Hill, Birmingham.—Ties for erecting scaffolding and for other similar purposes.

117,544 (Oct. 18, 1917).—R. C. Wheeler, Clifton House, Park Lane, Norwich.—Burglar alarm.

117,522 (Aug. 23, 1917).—W. I. G. Lewis, 36 Hospital Street, Tamworth, Warwick.—Gas heaters.

117,571 (Jan. 11, 1918).—T. M. McAlpine, 2 Central Buildings, Westminster, S.W. 1.—Frame mould for casting concrete slabs and blocks.

117,572 (Jan. 14, 1918).—G. H. Akerlund, Wylie, Red Lake, Minn., U.S.A.—Heating and ventilating systems for buildings.

117,644 (June 18, 1917).—St. Helens Cable and Rubber Co., Ltd., and J. C. White, Arpley, Warrington, Lancs.—Locking or securing devices for electric fittings.

117,667 (July 24, 1917).—E. R. Calthrop, Eldon Street House, Eldon Street, Brighton.—Cellular concrete structures.

117,796 (May 6, 1918).—J. J. Cooke, 709 Old Kent Road.—Boiling ring gas fitting.

117,787 (March 8, 1918).—Jan Keiser, 155 de Schuystraat, The Hague, Holland.—Roller-blind pulleys.

Any of the above specifications may be obtained from J. D. Roots.

VARIETIES.

THE Local Government Board Inspector has approved the site selected by the Huthwaite Urban District Council for their town planning scheme.

CAPT. LENOX PATON FIGGIS, M.C., of the Buffs, eldest son of Mr. T. Phillips Figgis, F.R.I.B.A., is reported killed in action on August 27.

THE Frodingham Estate Co., Ltd., has been registered as a private company, with capital of £200,000 in £1 shares, to carry on as land and property owners, builders, &c.

MANSFIELDSTOWN Church, Ireland, in the parish of Kilsaran, has been recently restored after being in disuse for over forty years, and has been re-opened as a chapel of ease.

THE Wrexham Town Council have decided to modify their housing scheme, and to apply for sanction to borrow £6,500 for the purchase of a portion of the Acton Park Estate and an adjacent field for the erection of houses.

THE London Building Trades Employment Exchange Committee have secured from the Minister of Labour a promise to reserve the new employment exchange in Tavistock Street, Covent Garden, for the sole use of workmen in the building trade.

SEC.-LIEUT. F. W. MESTON, M.C., of the Gordon Highlanders, is gazetted 1st Lieutenant. Prior to joining up in 1915 he had completed his articles in the office of Mr. G. Bennett Mitchell, architect, of 148 Union Street, Aberdeen.

THE Manchester Royal Infirmary Old Site Committee, at their last meeting, passed a resolution calling on the Art Galleries and Libraries Committee for the reports asked from them last January as to the erection of a library and art gallery on the vacant land.

THE Deeside District Committee, after careful consideration of the communication received from the Local Government Board, have appointed a special committee to consider the question of erection of working class dwellings in the district.

LAST week at their meeting the Pickering Rural Council received a report that an inspector from the Local Government Board had been down on the question of the housing of the working classes after the war. A committee was appointed to report where cottages were required.

MR. ISAAC CANN, the gas and water engineer to the Widnes Town Council, obtained the Council's sanction for the erection of a new pumping station at Delb Vale, near Gatacre Station. Excellent progress has been made with the bore hole, and it is hoped that shortly there will be an additional million gallons per day to the supply.

AT a special meeting of the Sunderland Town Council on the 28th ult., a special committee was appointed in connection with the Council's housing schemes to negotiate for the purchase of the land at High Blarnes, Sunderland. This land is 25 acres in area, and its cost is £12,000.

THE Lewis War Memorial Committee met on the 29th ult. at Stornoway, Lord Leverhulme presiding, when it was decided to make an appeal for £10,000 for the purpose of erecting an artistic memorial. The Chairman announced a contribution of £5,000 from a friend towards the amount suggested.

GENERAL LUDENDORFF is announced as having returned from the Front to Berlin to inaugurate a family tomb in the Berlin Cemetery. The tomb has been erected to commemorate his two sons shot down as aviators, and consists of a plain stone with the name Ludendorff and the family motto, "Fearless and faithful."

ON Friday last the Electricity Committee of the Glasgow Corporation made an inspection of the extensions made at the Dalmarnock power station. Extensive provision is being made for the future supply of power and light, and when completed the new station will be one of the largest and most important in the country.

THE Nantwich Urban District Council have under consideration a proposal to erect thirty workmen's dwellings, a site on the Council's land at Wall Fields having been suggested for the purpose. The Council have accepted the tender of Mr. Wiliam Mulcaster, of Haslington, for the Pillory Street sewer at a cost of £195 15s.

THE Arbroath Town Council have been considering the question of purchasing the public hall from the Public Hall Buildings Company. Sir Francis Webster, of Ashbrook, Mr. William Webster, of Denley, and Mr. James Webster, of London, have purchased the hall for the sum of £2,500, and it is announced intend to present it with a sum of £450 to meet the cost of improvements to the town, on the stipulation that it is known as "The Webster Hall."

CONSIDERABLE alterations and renovations have been carried out to the Tivoli Music Hall, Manchester. The gallery has been transformed into an upper circle with armed seats, giving accommodation for 450 occupants as against 320 previously. The whole of the furnishing and decoration has been carefully carried out, at a total cost of £4,000, under the supervision of the general manager, Mr. Frank Ashworth.

AT a recent conference with Mr. Stewart (representative of the Local Government Board) it was decided to recommend the Leek Urban District Council to acquire provisional sites in Leek for the erection, after the termination of hostilities, of 100 workmen's dwellings, and that the necessary plans be prepared for submission to the Local Government Board. The Council have appointed a sub-committee to consider the matter.

DUMBARTON Town Council, with the consent of the Ministry of Munitions, have just completed a useful extension of their waterworks. Under their Provisional Order of 1914 they acquired the right of the Milton Burn, and they have diverted 105 acres of this watershed into Loch Humphrey by linking up the loch with the moor dam. The pipe is estimated to deliver 200,000 gallons per day. The scheme has cost £1,300, and has been designed and carried out by the water manager, Mr. W. B. Carberry, with Messrs. Babtie, Shaw & Morton, C.E., Glasgow, as consulting engineers. The consumption of water for trade purposes in Dumbarton has enormously increased in recent years.

THE Housing Committee of Newport Corporation has formulated a scheme for the approval of the Town Council by which it is proposed to build 1,000 houses at a cost of £500,000 on the eastern side of the borough. The two sites suggested are the Somerton estate, which the Corporation provisionally took from Sir Thomas Watson, Bart., some years ago (but the option of which was not finally taken up), and in the Beechwood Park district. It is proposed to have a variety of type of house, and not to put more than twelve houses on an acre. Any deficit beyond the expenditure of a penny rate on the scheme it is hoped that the Government will meet.

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*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors desiring payment should clearly state their wishes. No payment will be made until after publication, and a commission to prepare articles or drawings does not necessarily imply acceptance or approval.

The Editor will be glad to receive from Architects in London and the Provinces results of Competitions and Tenders and other particulars of Works in progress in which they may be interested.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

We have upon our staff a very eminent Barrister, who will be glad to answer in the columns of this paper any legal question that may be of interest to our readers. All letters must be addressed "Legal Adviser," Office of "The Architect," Imperial Buildings, Ludgate Circus, London, E.C.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 14, after that date on payment of 4d.

CONTRACTS OPEN.

BARGOED.—Sept. 17.—For painting the Bargoed Workmen's Institute. Secretary, The Institute.

DERBY.—For excavating and preparing ground for motor weighbridge, together with erection of small office building in connection therewith, for the Guardians of Derby Union. Clerk to the Guardians, Poor-Law Offices, Derby.

LUTON.—For erection of extensions to the generating-station buildings, for the Corporation. Electrical Engineer, St. Mary's Road, Luton.

MANCHESTER.—Sept. 16.—For painting exterior and interior of East Gorton branch library, for the Libraries Committee. City Architect, Town Hall. Deposit 10*s.* 6*d.*

PRESTON (NORTH SHIELDS).—For building buttresses, &c., at the Miners' Institute, Preston. Messrs. W. Dixon & Son architects, Newcastle-on-Tyne.

REDDITCH.—For extensions to the electricity works, Redditch, for the Redditch Urban District Council. Mr. F. F. Bayliss, 18 Unicorn Hill, Redditch.

SWINDON.—Sept. 16.—For painting the convalescent wards at the isolation hospital, for the Swindon and District Hospital Board. Mr. J. McGregor Johnson, clerk, Swindon.

TEHIDY (CORNWALL).—Sept. 16.—For erection of a pavilion at Tehidy Sanatorium, for the Tuberculosis Committee of the Cornwall County Council. Mr. E. H. Crispin, architect, Truro.

TENDERS.

ANNAN.

For works in connection with Eaglesfield water supply, for the Annan District Committee.

P. DRUMMOND & SON, Lockerbie (*accepted*) £46 10 3

CLOGHEEN (IRELAND).

For construction of waterworks, for the Rural District Council.

J. BROWN (*accepted*) £1,342 0 0

GREENOCK.

For alterations and additions to building at 3 Shaw Place, for the Corporation.

Structural Alterations.

A. F. MCPHERSON & Co., 80 Roxburgh Street (*accepted*) £359 0 0

Painter Work.

D. & D. COLQUHOUN, Union Street, Greenock (*accepted*) 129 0 0

ROMFORD.

For repairs to roof of barn and repairs to windows, &c., of Bretons House, at the sewage farm, for the Urban District Council.

A. GOZZETT (*accepted*) £55 5 0

WAKEFIELD.

For works at the maternity home, Blenheim Road, for the Corporation.

Accepted tenders.

C. TURNER & SONS, Wakefield, painting work £355 2 6
H. GILLOT, Cheapside, plumbers' work . 189 19 6
P. PARKER, Northgate, electric wiring, &c. 103 13 0

WEYMOUTH.

For works to schools, for the Education Committee.

Accepted tenders.

PATES BROS., St. John's, £26; St. Augustine's, £9 10*s.*; St. Mary's, £26.
T. WARREN, Cromwell Road schools, £6 19*s.* 0½*d.*

WIGAN.

For erection of buildings at the electricity station for the Corporation.

MASSEY BROS. (*accepted*) £8,030 0 0

THE Chicago Pneumatic Tool Co. announce that the contract has been let and work started on the erection of an up-to-date addition to their Cleveland plant, which is planned to double the present output. It is expected that work will be completed on the building itself about November 1. The necessary equipment has been ordered, and it is believed will be delivered and ready for installation by the time the building is completed, so that the additional production contemplated will be available very soon thereafter.

CAPTAIN SCHARROO, of the Military School of Engineers in Holland, has contributed to a Dutch magazine a very interesting article relating to the waterproofing of Portland cement with "Pudlo." After giving a brief explanation of the various methods of waterproofing cement, he states that he found both liquids and powders generally affected the cement adversely. He was therefore very sceptical about the outcome of his experiments with the powder "Pudlo." The results, however, were very successful. Reference is made to some tensile and compression tests made with Pudloed concrete by Messrs. Koning & Bienfait, the Dutch cement experts, and from these Captain Scharroo's experiments are confirmed that "Pudlo" makes cement perfectly impervious without detrimentally affecting the material.

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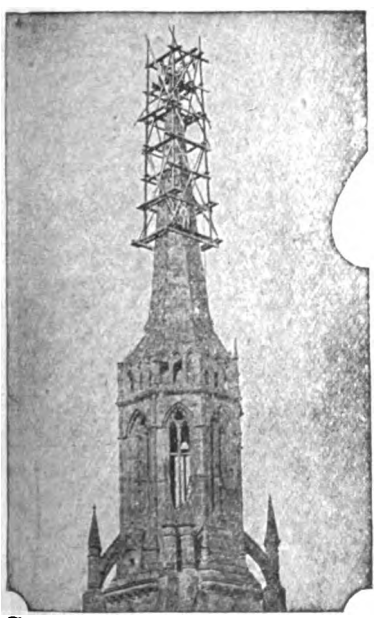
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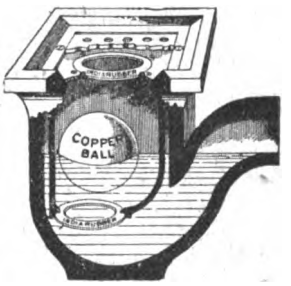
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PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 106,998 (May 14, 1917.—Dated under International Convention, June 3, 1916).—Asbestos Protected Metal Co., First National Bank Building, Pittsburg, Penn., U.S.A.—Protected metal article for building purposes, such as a sheet, bar or like article.

109,049 (August 8, 1917.—Dated under International Convention, August 19, 1916).—L. B. Donkers, Glion, Vaud, Switzerland.—Road sweeping machine equipped with means for automatically removing the sweepings.

117,902 (July 24, 1916).—W. J. Ayles, Broughton, Stockbridge, Hants.—Concrete blocks and the like with means for making the same.

117,915 (June 8, 1917).—J. H. Walker, "Eridge," Shooter's Hill, Woolwich, Kent.—Metal reinforcements for concrete.

117,931 (August 2, 1917).—J. C. White, A.M.I.E.E., 16 Westgate, Hale, Cheshire.—Ceiling roses and the like electrical fittings.

117,964 (August 16, 1917).—T. K. Patterson, 94 Main Street, Bangor, Down.—Room and other grates, ranges and heating apparatus.

117,965 (August 16, 1917).—William Horner, The Cottage, Shanganagh Terrace, Ballybrack, Dublin.—Hanging of window and like sashes.

117,994 (September 14, 1917).—B. L. Hurst, Craig's Court House, Charing Cross, S.W. 1.—Huts, sheds, warehouses and other buildings.

118,018 (October 31, 1917).—Percy Watson, 117 Cleethorpe Road, Grimsby.—Electric cooking stoves.

118,038 (November 24, 1917).—H. K. Dyson, 21 Great Peter Street, Westminster, S.W. 1.—Concrete bars, particularly applicable to glazing bars.

118,047 (December 28, 1917).—Robert Perry, Whetlow House, Huntley, Glos.—Gate fasteners.

118,048 (December 31, 1917).—L. V. Leonard, 619 Bridge Road, Richmond, and A. J. Allen, 18 Milverton Street, Moonee Ponds, both in Victoria, Australia.—Electric heating apparatus.

118,056 (February 2, 1918).—Alexander Brown, Sirocco Engineering Works, Belfast.—Air heating furnaces or stoves.

118,058 (August 12, 1918).—F. C. C. Rings, 58 Victoria Street, Westminster, S.W.—Centreless reinforced concrete construction of building and like structures.

118,075 (May 28, 1918).—Joseph Hudson and J. C. Hudson, Barr Street, Hockley, Birmingham—Speaking tubes.

117,832 (July 26, 1917).—Holophane Glass Co., 340 Madison Avenue, New York, U.S.A.—Reflectors and screens for illuminating purposes.

117,865 (Oct. 20, 1917).—J. W. Ferrier, Lieut. Canadian A.S.C., 24 Bernard Street, W.C.—Building blocks.

117,869 (Oct. 29, 1917).—Fred Lomax and Arthur Kay, trading as The Kamax Heater Co., Spring Lane, Radcliffe, near Manchester.—Fuel economisers and fire backs for domestic fire grates and the like.

117,876 (Nov. 24, 1917).—C. Y. Hopkins and James Cartland & Son, Ltd., Constitution Hill, Birmingham.—Fanlight and like window opening and closing apparatus.

117,882 (Jan. 7, 1918).—John Pye, Bella Vista, Glanmore Road, Uplands, Swansea, and J. B. Dawson, builder and contractor, Cwm, Gwr Garden City, May Hill, Swansea.—Cross cut saw frame.

117,718 (Sept. 7, 1917).—H. D. Hope and Henry Hope & Sons, Ltd., 55 Lionel Street, Birmingham.—Pivots for swinging casements.

117,725 (Sept. 18, 1917).—T. B. Hadwin, 370 Ainsworth Road, Radcliffe, near Manchester.—Domestic fire-grates.

117,730 (Sept. 25, 1917).—J. D. Jackson, 18 Smith Street, Manly, near Sydney, N.S.W., master plumber.—Domestic water heaters.

117,733 (Oct. 1, 1917).—James Holt, 19 Marlwood Avenue, Wallasey, Cheshire.—Siphon-flushing cisterns.

117,783 (Feb. 27, 1918).—Dominick Lavin, Bally Glass, Kilmovee, Ballaghaderrine, Mayo, Ireland.—Instrument for marking off angles on building materials and the like.

117,785 (March 6, 1918).—Robert Illemann, 54 Scott Street, Port Dundas, Glasgow, and J. A. Montgomerie, 72 George Street, Bridgeton, Glasgow.—Paint.

117,788 (March 16, 1918).—The Falkirk Iron Co., Ltd., Falkirk Iron Works, Falkirk, and John Peacock, Philip Street, Falkirk.—Baths.

117,701 (Aug. 9, 1917).—A. B. Soar, 6-16 Phipp Street, E.C. 2, and C. F. Archer, 6 Handen Road, Lee, Kent.—Doors, gates, shutters, blinds, screens, or the like.

Any of the above specifications may be obtained from J. D. Roots.

AT the forty-fourth annual congress of the Incorporated Sanitary Association of Scotland, held at Stirling, Mr. John Frew, the county sanitary inspector of Linlithgowshire, was elected President of the Association, and Mr. W. E. Whyte, clerk to the Middle Ward District Committee of Lanarkshire, and Provost Raffan, of Stirling, as Vice-Presidents. Mr. George Middleton, writer, Glasgow, was reappointed secretary and treasurer. The membership of the association now numbers 458, with funds amounting to £1,137.

THE Liskeard Rural Council have received an intimation from the Local Government Board stating that an inspector would visit the district to confer with representatives respecting the proposal to erect ninety workmen's dwellings. A closing order has been obtained against the owner of two cottages at St. Ive village. It was stated that the back wall of the houses was built on the boundary wall of the churchyard, and that scores of bodies were buried within a few feet of the houses, the ground floor of which is 5 feet below the level of the churchyard.

AMONG the plans approved by the Paving and Buildings Committee of the Rochdale Council are the following:—Extension to works at Caldershaw for S. Heap & Son; garage and three houses in Ramsay Street for Mr. G. W. Tuck; shed in Princess Street for John Sandiford & Sons; transformer house in Norwich Street for John Pilling, Ltd.; boiler-house in Milnrow Road for Thos. Robinson & Son, Ltd.; addition to works at Sudden Highams, Ltd.; and workshop in Kilworth Street for Lear & Heywood.

WAGES in the Birmingham building trade are again the subject of negotiation between employers and workmen. At a mass meeting of building trade operatives at Smithfield Lower Market, Birmingham, it was reported that in response to the men's demands, the employers had offered 1s. 4d. per hour for skilled men and 1s. 1d. for labourers and navvies, plus 12½ per cent. bonus. To a resolution that the offer be accepted, an amendment was moved, agreeing to the wages rates provided the employers would receive notice for alterations of rules on November 1 next, the alterations to come into force in April 1919. The amendment was carried.

THE Board of Trade have held an inquiry into the application of Messrs. Levenstein, Ltd., of Manchester, and British Dyes, Ltd., in connection with their plans for a large works and dye-making plant at Ellesmere Port, near Birkenhead. The scheme involves the diversion of the new road, and plans have been deposited with the Ellesmere Port District Council showing proposed new light railways to run from Little Sutton station (three miles distant) in a circular route to the ship canal side of the North Road. A double line of railway is to be laid, which together with the land, rolling stock, station and buildings, permanent way and sidings, is estimated to cost £75,000.

A VILLAGE Clubs Association has been formed with the object of promoting the establishment in rural villages throughout England and Wales of clubs which may be the centre of social activity in rural life. An influential executive committee has been appointed, and also a general committee, and among those who have expressed willingness to serve are Professor Abercrombie, Professor Adshead, Mr. H. R. Aldridge (National Housing and Town-Planning Council), Mr. W. A. Haviland (secretary, Central Landowners' Association), and Mr. G. G. Rea, C.B.E. Mr. Alexander Goddard, C.B.E. (secretary of the Surveyors' Institution), has consented to act as joint hon. secretary with Mr. Geo. Dallas.

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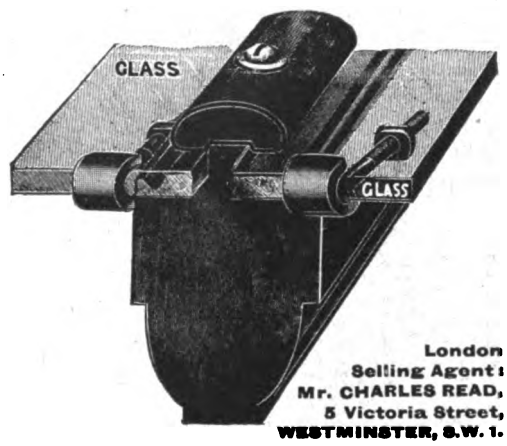
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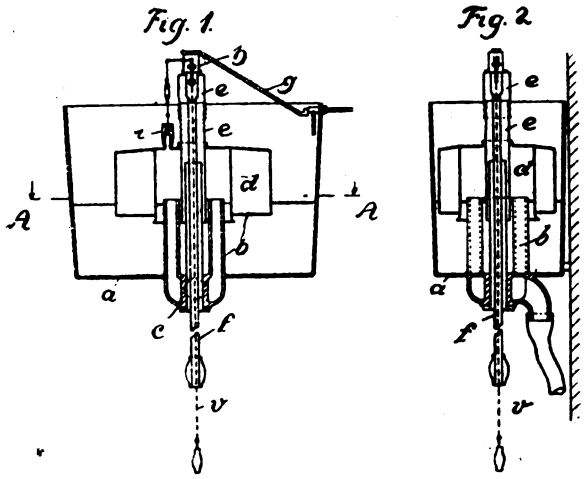
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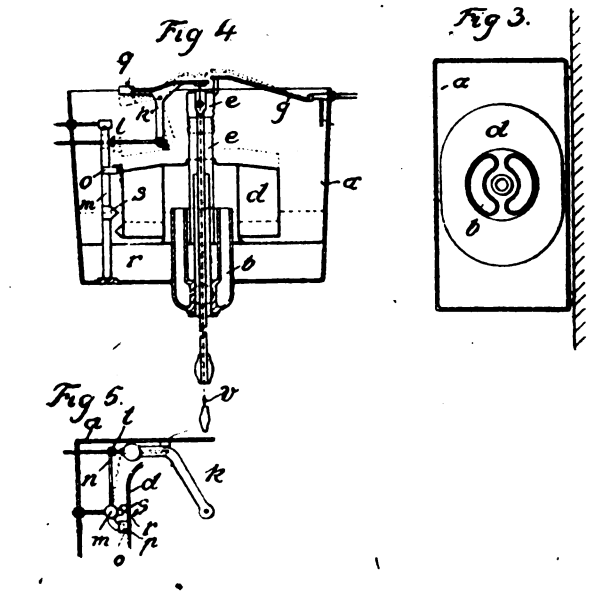
BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 107,587 (June 25, 1917).—Dated under International Convention, June 23, 1916.—Siphone Flushing Apparatus.—Wilhelm Hubert, 22 Douzenbachstrasse, Siegen, Westphalia, and Heinrich Bosch, 18 Weinerstrasse, Siegen, Westphalia, Germany.—This invention relates to a siphon flushing apparatus for waterclosets or the like, comprising a bell acting as a displacer, a vertically adjustable portion, of a stand-pipe, forming a guide tube, and separate pulling devices for large and small flushes. Compared with known apparatus of this kind, the improved apparatus is distinguished by the fact that the pulling devices which extend through the bell and the flushing cistern are co-axial to each other and act at the centre of gravity of the siphon bell without lever mechanism and with control of stroke or lift, so that





an immediate syphon takes place at each kind of flush. This invention is illustrated in figs. 1, 2, and 3, and a modification in figs. 4 and 5. In figs. 1, 2, and 3, *a* is the flushing cistern with the flushing passages *b* and the outlet *c*. Over the passages *b* is situated a bell *d* constructed as a displacer. The guide tube *e* is divided in such a manner that the two parts can be moved relatively to each other, whereby the amount of the flush can be varied. Two pulling devices are provided for operating. The pulling device *f* produces the large flush, and the pulling device *v* the small flush. The guide tube *e* is connected to a lever *g* which operates the water admission valve in a known manner. When it is desired to have the large flush the pulling device *f* is pulled gently and it moves downwards. The bell *d* moves down, raises the water level by displacement and the water enters the passages *b*, and owing to the siphon action empties the flushing cistern *a* rapidly and completely. In the downward movement of the bell the lever *g* also moves down and thereby opens the water admission valve. The inflowing water raises the bell and by means of the lever *g* closes again the water admission valve in the usual way. To produce the small flush the pulling device *v* is arranged inside the pulling device *f*, is moved down, and with it a stop *h* moves down likewise and bears upon the upper part of the guide tube *e*. In this manner through lever mechanism, an air valve *i* is opened, and air enters the middle space of the bell, which space is constructed as a suction siphon. On the puller *v* being continued to be pulled, the water level rises owing to the displacement consequent upon the sinking of the bell *d*, but no suction is produced owing to the admission of air. Consequently any desired quantity of water can be allowed to flow out of the flushing cistern according to the amount of the descent of the bell, the water flowing over the edge of the tube *b* into the outlet pipe *c*. In figs. 4 and 5, the large flush is produced as in fig. 1, and the small flush is produced by the following means. On the pulling device *v* being pulled down, a bent lever *k* and a stop *l* strike a lever *n* mounted on the easily rotatable bar *m*. A nose *o* on this lever *n* is thereby caused to move out of the position indicated in dotted lines in fig. 4 into the position shown in full lines. The bell *d* which is moved down by the pulling device *v* raises the water level, and the water enters again the passages *b*. Suction takes place and the bell bears with its stop *p* upon the nose *o*, see fig. 5. By this means the bell is held in place and the suction is stopped. On releasing the pulling device *v* the counterweight *q* moves the pulling device *v* together with the stop *l* back into their original positions. The opened water admission valve allows water to flow in again, the bell rises, and the nose *r* strikes the stop *s* and pushes the nose *o* together with the lever *n* back into the original position indicated in dotted lines in fig. 4.—June 26, 1918.

[The above being an enemy application, manufacturers of this class of goods who are interested and who may desire to manufacture might apply to J. D. Roots & Co. for information.]

THE Local Government Board are to be asked to approve the purchase by the Higham Ferrers Town Council of land in Wharf Lane at a cost of £700 to be used for the purpose of erection of fifty houses.

WE have received from Messrs. Gammon & Smith, of Petersfield, Hants, their price lists of their "Everlasting Paint" and "Everlasting Brooms and Brushes." Messrs. Gammon & Smith claim for their "Everlasting Paints" that they are from 25 to 40 per cent. cheaper than other standard paints upon the market, and are a positive preservative for steel, iron, and metals of all kinds, as well as for wood. An important point is that two coats are equal to galvanising and form a protection which is almost non-perishable. The paint is a liquid carbon paint and contains no white or red lead. Messrs. Gammon & Smith state that the secret of the success of their paint in the preservation of iron and steel is their hydro-carbon oil with which the pigment is bound together. The resisting qualities of the paint properly applied will resist atmospheric conditions, as well as chemical action which may be set up on account of brine, acids, fumes, or gases from any source. In proof of the life of the paint a case is given of a severe test on a river front, subject to smoke and fumes from engines and all weather conditions; after a period of six years the metal on which it was applied was of good appearance, exhibiting no depreciation, at the same time preventing corrosion. Under normal conditions three coats of "Everlasting Paint" properly applied on metal or wood should last a period of ten years. The paint is invaluable for shipbuilders, gas companies, tram, 'bus, and railway companies, &c., and for builders and decorators, and can be obtained in steel grey, maroon, or olive green. Instructions are given in the list as to application. The brooms and brushes list is illustrated and prices given.

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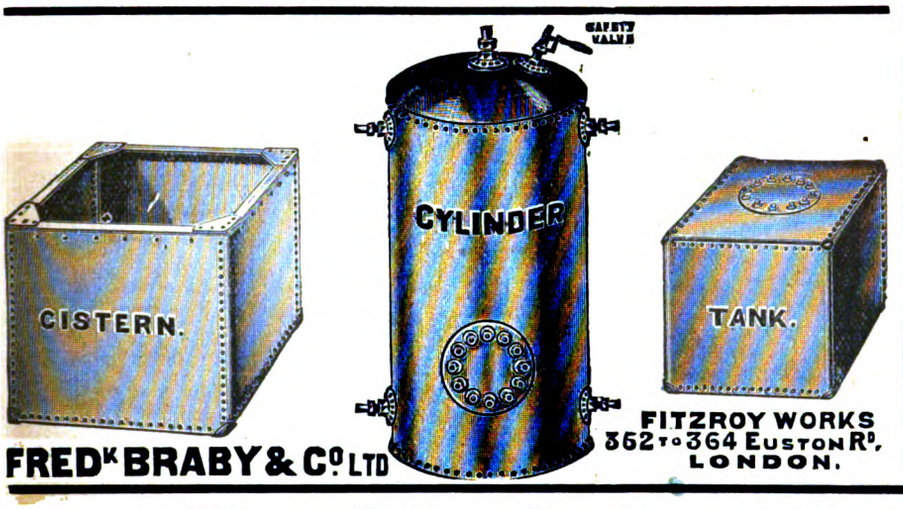
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TENDERS, ETC.

*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than* 2 P.M. *on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

INDEX TO LAST VOLUME.

Owing to the RESTRICTION ON USE OF PAPER and in the interest of NATIONAL ECONOMY it is not our intention to issue the INDEX for the last half-year with the Journal; but those desiring a copy can get it on application, free of charge up to September 14, after that date on payment of 4d.

CONTRACTS OPEN.

BELFAST.—Sept. 24.—For erection of a laboratory at the infectious diseases hospital, Purdysburn, for the Public Health Committee. Mr. S. C. Hunter, surveyor, Scottish Provident Buildings.

CLATTERBRIDGE (CHESHIRE).—Sept. 23.—For painting the infectious diseases hospital at Clatterbridge, for the Wirral Joint Hospital Board. Mr. J. E. S. Ollive, clerk, Birkenhead.

DERBY.—For excavating and preparing ground for motor weighbridge, together with erection of small office building in connection therewith, for the Guardians of Derby Union. Clerk to the Guardians, Poor-Law Offices, Derby.

LUTON.—For erection of extensions to the generating-station buildings, for the Corporation. Electrical Engineer, St. Mary's Road, Luton.

PRESTON (NORTH SHIELDS).—For building buttresses, &c., at the Miners' Institute, Preston. Messrs. W. Dixon & Son, architects, Newcastle-on-Tyne.

REDDITCH.—For extensions to the electricity works, Redditch, for the Redditch Urban District Council. Mr. F. F. Bayliss, 18 Unicorn Hill, Redditch.

SALFORD.—Sept. 23.—For painting inside of Blackfriars Road baths, for the Baths Committee. Superintendent.

WEST VALE (YORKS.).—Sept 28.—For work in erection of communal kitchen in Stainland Road, West Vale, for the Greetland Urban District Council. Mr. Arthur T. Longbotham, clerk, Halifax.

TENDERS.

BURTON-ON-TRENT.

For tramway depôt extension works, for the Town Council.

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LEEDS.

For excavations and concrete work in connection with extension of electricity works, for the Corporation.

W. AIREY & SON (*recommended*) . .	£19,997 0 0

WELTON (SKEGNESS).

For painting the waterworks at Welton, for the Skegness Urban District Council.

J. STEELE (*accepted*)	£39 2 6

YIEWSLEY.

For improvement of pathway in St. Stephen's Road, and painting required to front of Council chamber and cottages, for the Yiewsley Urban District Council.

W. J. WILKINSON (*accepted*), £34 10*s.* and £7 10*s.* respectively.

THE INDUSTRIAL RECONSTRUCTION COUNCIL.

THE first annual general meeting of the Industrial Reconstruction Council (Incorporated) was held on Tuesday, September 17, in the Hall of the Institute of Journalists, the chairman, Mr. Ernest J. P. Benn, C.B.E., presiding over a large and enthusiastic gathering of members.

In his resumé of the present year's work, Mr. Benn remarked on the extraordinary growth of public interest in the great problems of industrial reconstruction. After the war it was the first topic discussed in all quarters and by all classes. He ventured to hope that it was in no small measure due to the efforts of the I.R.C. that the principle underlying the Whitley Report was now so widely accepted, and that everywhere our industries were awakening to the need for closer organisation. The I.R.C. held fast to its watchword of industrial self-government, and by insisting on the only sane interpretation of that phrase, was, he thought, doing useful work in counteracting the dangerous revolutionary influences that were abroad. Mr. Benn gave a brief summary of the year's activities in the way of meetings, lectures, conferences and the publication and distribution of literature, and made a strong appeal to those present to secure fresh adherents to the cause, and thus further the possibilities of future development.

Lieut.-Col. E. Pottinger, D.S.O., organising secretary, in presenting the financial statement, announced that the autumn work in the provinces would largely consist in the establishment of Branch Reconstruction Associations which should keep local interest and enthusiasm constantly stimulated in each industrial centre.

The following new members were elected to the executive committee:—Sir Charles McLeod, Miss Lillian Dawson (Fabian Society Women's Group), Mr. George Selby (cloth hat and cap manufacturer), Mr. John Baker (Iron and Steel Trades' Confederation), Mr. T. Owen Jacobsen, M.P., Miss M. F. Peake (Welfare Supervisor), Mr. E. W. Mundy (Labour Co-partnership Association), and Lieut. H. V. Roe, R.A.F.

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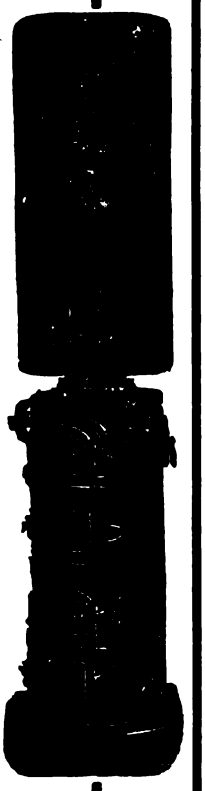
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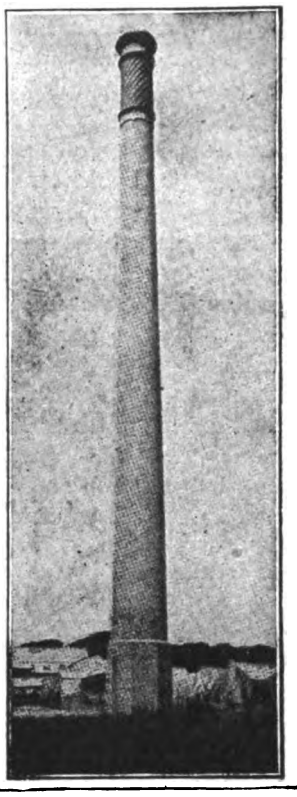
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AN UNPUBLISHED BOOK OF ÆSOP.—II.

THE LOVERS OF LEARNING AND THE SELLERS OF SCROLLS.

Now in Syracuse were divers compilers of scrolls for the men of cunning whom men called architects, but which were written even as man cannot live without wheaten bread for the drachmas of the architects. And also as Syracuse was a lordly city and its architects were many was there founded an Agora in which the architects met and discussed matters of moment concerning the use of the acanthus, the construction of volutes, and the composition of mortars, and as befits a centre of learning was there also a storehouse of scrolls dealing with all the questions on which the architects pondered, and the wisdom of the lands watered by the Nile and Euphrates was gathered there, and the architects set a man of learning over it that he might direct the men of their number who sought information and lessen their labours. And divers of the compilers of scrolls which were brought forth at intervals and for which the architects gave their drachmas thinking that the paths of learning might be made easier for the architects, and seeing that all were not able because of great distances to consult the scrolls kept in the storehouse of the Agora, did make petition unto the Council which directed the Agora, saying, "As ye wish the learning of the ancients disseminated among the architects, peradventure ye will allow us to copy some of the scrolls in the storehouse that architects may be enlightened and worship at the shrine of learning." But the Council of the Agora made answer, "In sooth thou canst do what thou desirest, but thou must for the service pay to us gold or give us share of jewels." Then the writers of the scrolls went away heavy hearted, for in truth their expenses were grièvous because of a great war, nor were they willing to pay the sum demanded by the Council of the Agora. But meeting in the public places of Syracuse certain sellers of scrolls who professed not great principles but worked even as they did for a living, they bemoaned their hard fate and spoke even of their difficulty. Then were they straightway gladdened, for the sellers of scrolls said to them: "Though our storehouse be smaller than that of the Agora and though we work even for profit, the thing ye wish for is good and reasonable, and if peradventure thou wilt choose the scrolls ye wish to copy ye may do so without payment, for great is learning and good the wish of all to spread its light over mankind, and especially among those who are called architects.

MORAL.—It is not always those who profess the highest principles who will do most for those who struggle to make good manifest, and performance is ofttimes more important than profession.

NEW PUBLICATIONS.

Trade Parliaments.

WE have received a little book on Trades Parliaments, written by Mr. E. J. Benn, the chairman of the Industrial Reconstruction Council, which deals with Trade Parliaments and their work, and is divided into chapters on organising organisations, rationing of materials, demobilisation, the disposal of Government stores, restrictions and pledges, finance, science and education, and other matters. Like other of Mr. Benn's works on the same subject, it is well and clearly written. We think the author overlooks the effect of certain issues which must be decided definitely in the near future, but that is a detail.

Works Lighting.

At the present time, when the conditions of the industrial workers are receiving such close attention, the appearance of an authoritative work on the subject of factory lighting is most opportune. "Works Lighting," by D. H. Ogley, B.Sc., which has just been published by Iliffe & Sons, Ltd., 20 Tudor Street, London, has been compiled, after careful consideration of all the existing practical lighting systems, with the view to assisting the manufacturer in deciding upon the most suitable form of illuminant for any particular purpose. The preface to the book has been contributed by Professor E. W. Marchant, D.Sc., Liverpool University, a well-known authority on works lighting, and the book will be useful to many who are concerned with the fitting up and maintenance of works and factories. After showing by statistics and other means how accidents and wastage are prevented by efficient lighting, chapters are devoted to the development and progress of gas lighting and electric lighting, and modern practice in both illuminants is described, and amplified with many illustrations and diagrams to show various methods now in use and their respective values for specific purposes. A useful section is devoted to the measurement of illumination, with formulæ to decide the placing and size of lighting units and the choice of reflectors.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 118,136 (Aug. 10, 1917).—Henry Clarke, 4 Millway, Mill Hill, N.W.—Automatic sprinklers for fire extinguishing.

118,166 (Sept. 5, 1917).—C. H. Freeman, 42 Lower Villiers Street, Wolverhampton.—Non-slipping flooring, steps, stairs, or the like.

118,168 (Sept. 10, 1917).—E. O. Boston, 25 Paradise Street, Birmingham.—W. R. D. Rangeley, Beecroft House, Potton, Bedford, and Albert & George Wright, Gamlingay, Cambridge.—Saws.

118,186 (Oct. 11, 1917).—John Kiell, 68 Willow Walk, Bermondsey, and A. A. Stow, 24 Fenchurch Street, E.C.—Control of the temperature in electrically heated apparatus.

118,210 (Dec. 5, 1917).—H. N. Barnes and E. Pollard & Co., Ltd., 29 Clerkenwell Road, E.C.—Hasp and eccentric fastening for detachably united portable walls and the like of army hutments.

118,232 (Feb. 20, 1918).—Perfect Window Regulator Co., 20 Exchange Place, New York, U.S.—Apparatus for raising and lowering windows.

118,236 (March 13, 1918).—A. W. Story, Ascendent Works, Wellington Street, Newton Heath, Manchester.—Reinforcements for concrete structures.

109,783 (April 27, 1917.—Dated under International Convention, Sept. 22, 1916).—Emilio Luling, 7 via Principe Umberto, and Mario Baroni, 21 Fatebenefratelli, Milan.—Beams or girders. This application for a patent has become void.

110,536 (May 18, 1917.—Dated under International Convention, Oct. 14, 1916).—Det Norske Aktieselskab for Elektrokemisk Industri, Norsk Industri-Hypotekbank, of Bygdo Alle 1, Christiania, Norway.—Pigments and process for the manufacture of same. This application for a patent has become void.

Any of the above specifications may be obtained from J. D. Roots.

THE Local Government Board is to erect 1,300 houses in the upper reaches of the Firth of Forth owing to the prevailing lack of accommodation.

THE death occurred last week at his residence, Carden House, Aberdeen, of Mr. Charles Cook, the head of the firm of Barry, Henry & Co., engineers and founders, Aberdeen.

THE Central Water Committee of the Linlithgow County Council state that they are going to employ on the work of construction at their reservoir at Beercraigs conscientious objectors as navvies.

LYDNEY District Council have been informed that as a first instalment the Government propose to erect 1,000 houses at Beachley. The plans show several classes of houses, many with bathrooms. Why not all?

MR. WILLIAM AWKEM, of Ladykirk, Berwick, has offered to the Government a 30-acre field at Ladykirk, on which he will build at his own cost ten cottages, and make the place a settlement for disabled soldiers. Each man will be given a three-acre holding.

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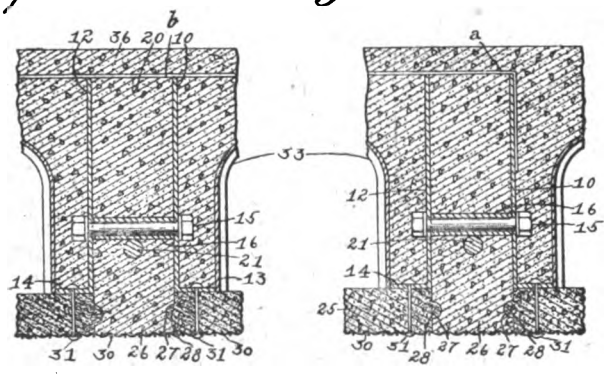
BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 117,344 (Sept. 18, 1917).—An Improved Composite or Reinforced Concrete or like Bar or Beam for use in the Construction of Buildings, Bridges, and the like. P. M. Stewart, 800 Riverside Drive, New York City, U.S.A., Engineer.—This invention relates to a composite or reinforced concrete or like bar or beam. The invention has for its object to provide such a bar, which is strong, light, and comparatively inexpensive, and is capable of being made at the mill or on the job, and which is adapted for use as a beam, girder, skylight bar or other part of the building. Fig. 1 represents in cross section a portion of a floor in which composite bars embodying this invention are used as beams. Fig. 2, a side elevation of one of the composite bars or beams shown in Fig. 1, and Fig. 3, a plan view of the bar or beam with the member of plastic material omitted. 10 and 12 represent the side members of the composite bar shown as substantially thin metal bars or plates having outwardly extended bottom flanges 13, 14. The metal bars 10, 12, are arranged in close proximity to each other and parallel, and they are connected together

Fig. 1.



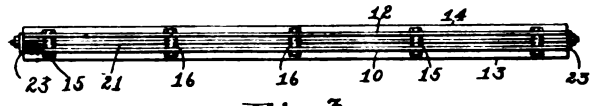


Fig. 3.

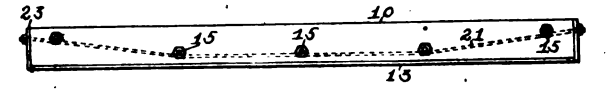


Fig. 2.

and secured in fixed relation at points in their length so as to be handled as one piece by bars or tie rods or bolts 15, and are separated by spacing devices, metal sleeves 16 on said bolts. The space between the side members 10, 12, is filled with plastic material 20, such as concrete and the like, which constitutes the intermediate or centre non-metallic member of the composite bar. The plastic member 20 is strengthened by a metal reinforcement 21, which is extended in the direction of the length of the bar and is passed under the intermediate tie rods or bolts 15, and extended through and secured to restraining plates or devices 23, as represented in Figs. 2 and 3. The plastic member 20 when set adheres firmly to the metal side members, and is bonded thereto, so as to form one rigid bar, which is capable of being handled as one piece and transported from the mill to the job, or which can be made on the job and handled as the ordinary steel girder, beam or bar. The composite bars or beams are especially adapted to be employed in the floor construction of buildings, and in Fig. 1, shown as beams, are secured at their ends to girders in the manner now practised with steel beams. The intermediate plastic members 20 of the beams a, b, may be extended below the bottom flanges 13, 14, of the side members 10, 12, as shown in Fig. 1, and have bonded to them a layer 25 of plaster, which forms a ceiling slab and is preferably keyed to the projecting portion 26 of the intermediate member 20 of the composite beams. The projecting end 26 is provided on its opposite sides with grooves 27, which are filled with ribs 28 on the ceiling slab 25. The layer 25 of plaster is supported by a layer 30 of metal, preferably wire mesh, which extends under the beams and is supported from the bottom flanges 13, 14, of the side members 10, 12, as by bolts or rods 31. The composite bar or beam is capable of being made of minimum weight, and this is especially true when gypsum is used as the normally plastic member which is reinforced longitudinally and transversely and in which the longitudinal reinforcement is placed under deflection and restrained from upward displacement by the transverse reinforcement with which latter the longitudinal reinforcement co-operates. —July 24, 1918.

HAMILTON Town Council are making inquiries with regard to the laying out of the estates of Udston and Glenlee for building schemes in view of the scarcity of houses.

THE death has taken place of Mr. James Wilson, the head of the firm of James Wilson & Sons, builders and contractors, Warrenpoint, Belfast. The business will be continued by his two sons, who were associated with him.

LININGS were granted at Glasgow Dean of Guild Court to the following:—Alley & M'Lellan, Ltd., engineers, Sentinel Works, Polmadie, to erect foundry and gantry in Jessie Street; Alexander Stephen & Sons, Ltd., Linthouse, to erect a brass store in Renfrew Road, and to make alterations on hall for boys' club in Cressy Street; James Howden & Co., Ltd., 195 Scotland Street, to alter and add to foundry buildings in M'Lellan Street; Edward MacBean & Co., Ltd., 123 Howard Street, to erect a boiler-house and chimney-stalk in Mary Street, Port Dundas; Thomson, Aikman & Co., Ltd., 175 West George Street, to erect a nitrate store in Smith Street, Kinning Park.

AT a meeting of Linlithgow District Committee of the County Council—Mr. S. B. Hog, of Newliston, presiding—a letter was read from the Local Government Board as to their scheme for providing 1,300 houses at Port Edgar for the Admiralty's workpeople and families, and requesting to know whether the District Committee were prepared to provide road, water, drainage, and lighting facilities for this proposed new town. The District Committee instructed the Clerk to reply that they were sympathetic with the scheme, but before giving a definite reply as to roads, water, drainage, &c., they desired to see the plans of the area proposed to be taken in and also of the class of the houses it was intended to erect.

WE have received from the British Thomson-Houston Company a new edition of a clear and comprehensive handbook on standard incandescent electric lamps. This is called Handbook No. 1A, and is a revised and fuller edition of their first lamp Handbook No. 1. The universal appreciation of and the widespread demand for the first lamp handbook issued has caused the British Thomson-Houston Company to issue this second edition, giving the latest revised association sales rules, terms and conditions, on incandescent electric lamps. Opportunity has been taken to make this new edition a more complete one in respect to the definitions and terms used in the lamp trade and lighting industry. We note with particular interest an interesting and informing article on the "Lumen," the new unit of light rating for electric lamps, and its method of application in solving illumination problems. This article is written in popular style, and is clear and convincing as to the merits of the Lumen as an all-round unit of light rating. There is also a complete list of photometric units, standards, and definitions, setting forth the new units of illuminating engineering, and clearly defining and describing each. These new units of illuminating engineering should be familiar to all electrical engineers and contractors as they are sure to become definite units of the lighting industry just as the electrical units, the "Ampere," "volt," "watt," &c., have become known to and used by the electrical trade. This handbook is issued for the use of the electrical trade and electrical engineers, and copies can be obtained from the Lamp and Wiring Supplies Department at Mazda House, 77 Upper Thames Street, London, E.C. 4.

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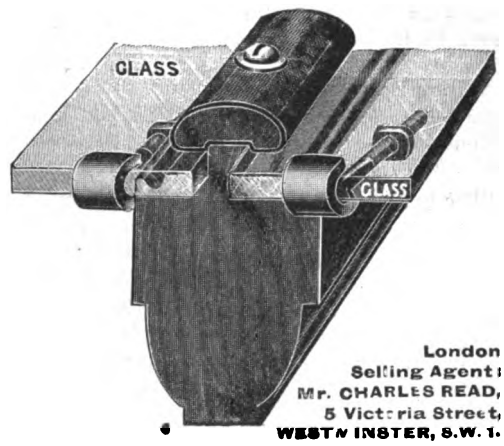
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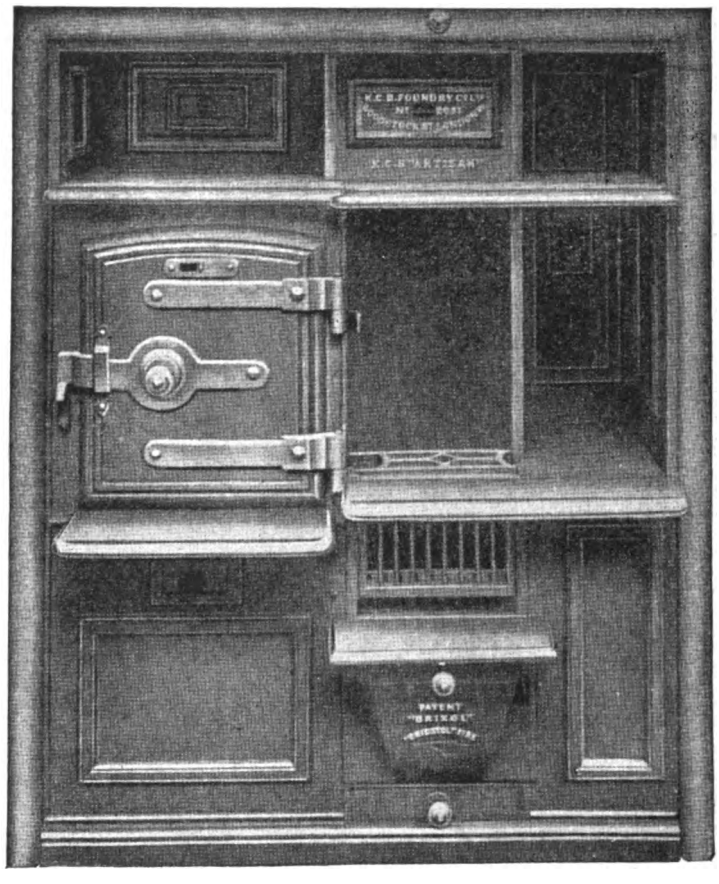
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THE
Architect and Contract Reporter.
FRIDAY, SEPTEMBER 27, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than* 2 P.M. *on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be re- at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they sponsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

CONTRACTS OPEN.

BODMIN.—Sept. 27.—For erection of a verandah at the Cornwall County Asylum. Mr. W. J. Jenkins, St. Nicholas Street, Bodmin.

BRADFORD.—For outside painting of St. Luke's War Hospital, for the Guardians of Bradford Union. Mr. F. Holland, architect, Bradford.

BRISTOL.—Sept. 27.—For (1) painting, plastering, &c., imbecile boys' room at Eastville institution; (2) painting, &c., aged sick men's wards, &c., at Eastville institution; (3) plastering ceiling of carriage shed at Stapleton institution; (4) painting, &c., at Bedminster relief depôt. Mr. J. J. Simpson, clerk, St. Peter's Hospital, Bristol.

CORK.—Oct. 2.—For converting existing buildings at proposed New Road Fernhurst, College Road, into dwellings, for Mr. T. Donovan. Mr. B. O'Flynn, architect, 60 South Mall.

MILNSBRIDGE.—For painting Elm Ing Mills, Milnsbridge, and adjacent property. Messrs. Joseph Dyson & Sons, Ltd., Milnsbridge.

WEST VALE (YORKS.).—Sept 28.—For work in erection of communal kitchen in Stainland Road, West Vale, for the Greetland Urban District Council. Mr. Arthur T. Longbotham, clerk, Halifax.

TENDERS.

BARNSLEY.

For supply of various articles, for the Barnsley Town Council.

CALLENDER'S CABLE CO., LTD., extra high-tension main	£2,672	0	0
BABCOCK & WILCOX, LTD., draught fan for boiler	294	0	0
STEWARTS & LLOYDS, LTD., steel steam pipes	110	0	0

BEDFORD.

For demolition of 106 and 108 Midland Road, for the Corporation.

H. BOWLER, Priory Street, Bedford (*recommended*)	£290	0	0

For supply of a 350 k.v.a. transformer, for the Town Council.

BRITISH ELECTRIC TRANSFORMER CO., LTD. (*accepted*)	£4350	0	0

DERBY.

For excavating and preparing ground in connection with laying down a motor weighbridge and erection of a small office building in connection therewith, at the institution, for the Guardians of Derby Union.

A. WOODIWISS, 33 Chatsworth Street (*accepted*)	£198	1	6

EASTBOURNE.

For addition to the administrative building at Gildredge Hospital, Old Town, for the Sanitary Committee. Mr. W. C. FIELD, borough architect.

G. BAINBRIDGE & SON, Terminus Road (*accepted*)	£362	0	0
Architect's estimate	350	0	0

LONDON.

For supplying and fixing heating boiler at the Town Hall, for the Lewisham Borough Council.

BRIGHTSIDE FOUNDRY AND ENGINEERING CO. (*accepted*)	£113	15	0

MESSRS. COPE & CO., 5 Bury Street, W.C., we are informed, supplied and fixed the whole of the internal tiling, wall and floor, as well as the special tiles for the bathrooms at the Beaver Hut, Strand. Similar work has been carried out by them at other Y.M.C.A. Huts, including Washington Hall, St. James's Square.

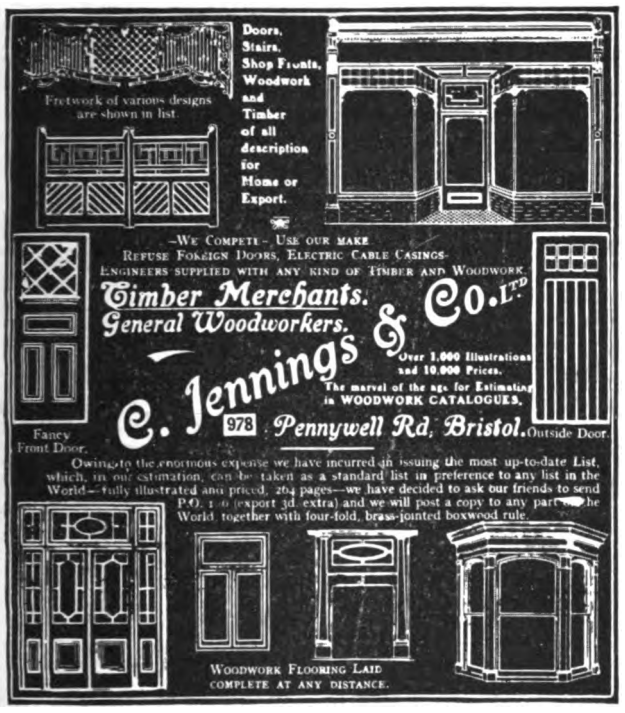
THE Corporation of Manchester have presented to Captain Henry Kelly, V.C., M.C., of the 10th Battalion Duke of Wellington's Regiment, who before the war was in the surveyor's department of the Manchester Post Office, an illuminated address and a gold watch and chain.

MR. F. LATHAM, borough surveyor, Penzance, in his report to the Town Council, stated that the water supply had been adequate since the borehole was practically sunk and that no other means had been adopted, but by the stoppage of waste. Mr. Richards stated that the difficulty of water supply for the town's own use had been solved practically for all time by the borehole. He trusted the time was not far distant when the Council would have pluck enough to complete the boring.

WE have received a letter from Messrs. Casson's Compositions Co., Ltd., the well-known manufacturers of the Casson paints, stating that to meet the demand for their manufactures they have purchased a large additional works close to Paddington on the Grand Junction Canal and have disposed of their premises at Fulham. No further goods will be received at Hurlingham Road, Fulham, S.W. In future all consignments will be required for delivery at either their Colham Mills, West Drayton, or at the new wharf close to Paddington. Instructions will be stated on all orders. In consequence of these changes more commodious office accommodation will be required, and Messrs. Casson have therefore taken offices close to P addington Station. Their registered address will therefore be 11 Craven Hill, Paddington, W. 2. Telephone number for the new offices will be Paddington 3670. Messrs. Cassons have also opened works at Hull, in addition to their two other factories.

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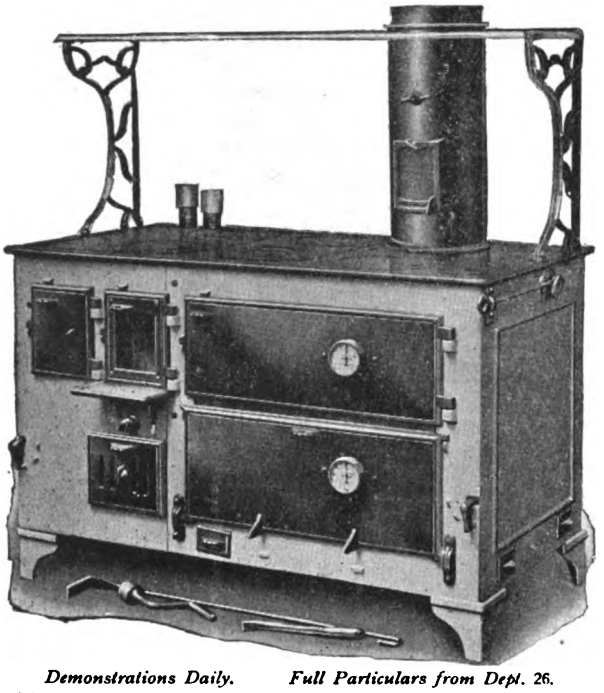
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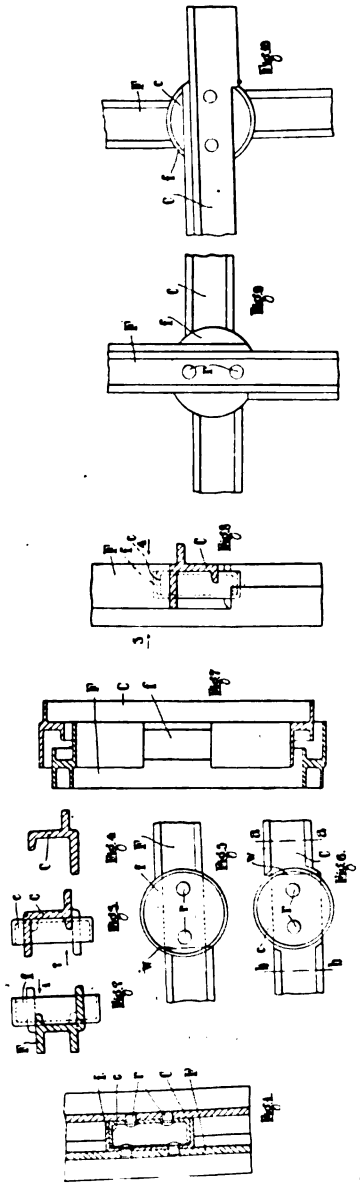
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BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

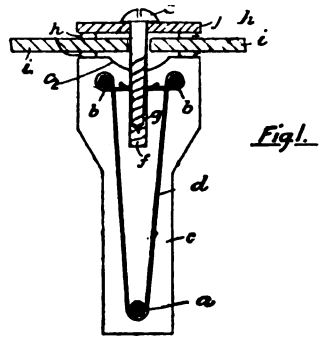
The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

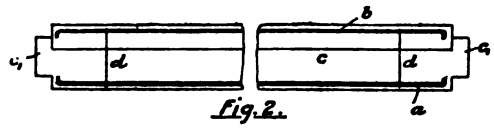
No. 117,718 (Sept. 7, 1917).—H. D. Hope and Henry Hope & Sons, Ltd., 55 Lionel Street, Birmingham. Pivots for swinging casements.—This invention relates to the pivots or joints between a movable casement and the fixed frame on which it is mounted. The object is to provide a joint with large bearing surfaces, giving complete closure between the movable casement and its frame, the parts being of such form that they can be quickly and economically manufactured. The invention can be applied to casements of wood, iron, or steel. Fig. 1 is a section through the axis of the joint, the swinging casement member C being in a position parallel to the fixed frame member F. Fig. 2 is a section of the fixed frame member F showing the larger cup *f* in elevation. Fig. 3 is a section of the swinging member at the plane *a-a* of fig. 6. Fig. 4 is a section of the swinging member at the plane *b-b* of fig. 6. Fig. 5 is an elevation of the fixed member and its cup attached, looking in the direction

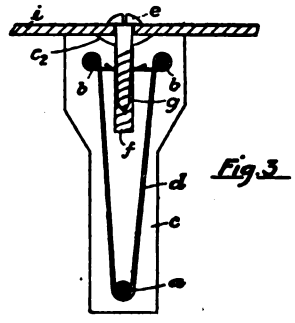


of the arrow *l* of fig. 2. Fig. 6 is an elevation of the swinging member and its attached cup, looking in the direction of the arrow 2 of fig. 3. Fig. 7 is an elevation looking parallel to the plane of the casement, showing the swinging member in its closed position; that is, parallel to and in close contact with the fixed frame member. Fig. 8 is a similar elevation to that shown in fig. 7, but with the swinging member at right angles to the fixed frame member. Fig. 9 is an elevation from the outside of the casement frame looking in the direction of the arrow 3 of fig. 8. Fig. 10 is an elevation from the inside of the casement frame looking in the direction of the arrow 4 of fig. 8. The fixed frame member F is made up of two similar lengths of standard section as shown at fig. 2, which are welded together at *w*, fig. 5. The swinging member is made up of two separate lengths of slightly different section as illustrated in figs. 3 and 4, which are welded together at *w*, fig. 6. The diameter of the larger cup *f* of the joints is preferably made greater than the depth of the standard sections used for the casement and frame respectively. In a standard section of casement frame fixed member F, two flanges project from one side of the web. At the place where the joint is to be placed the flanges are cut away to receive the larger cup *f* of the pair which constitute the joint. The cup may be a force fit in the space so formed, and its flat bottom is fastened to the web of the frame member. The flange of the movable casement member C is cut away in a similar manner, but to a slightly larger diameter to give a working clearance for the larger cup, and the smaller cup *c* is similarly fastened to the web of the member concentrically to the cut away flange space. The cups may be of steel or iron or non-corrosive metal. The fastening is effected by rivets *r*.—Aug. 7, 1918.

No. 118,038 (Nov. 24, 1917).—Improvements relating to Concrete Bars, particularly applicable to Glazing Bars.—H. K. Dyson, 21 Great Peter Street, Westminster, S.W. 1, consulting engineer.—This invention relates to concrete bars, such as those employed for supporting the slabs of glass in windows or for supporting sheeting such as thin plates, made of asbestos and Portland cement, in roofs and other parts of buildings. The bar, preferably reinforced, is provided at intervals with recesses, substantially parallel to the centre







line of the bar section, for the reception of screws or the like, the screws bearing upon cover slips of suitable material, such as asbestos and cement, which press the slabs of glass or other material against the bar; asbestos tape, felt, or other suitable material may be interposed between the slabs and the bar, and also between the cover strip and the slabs. In the case of sheeting which is continuous over the bar, the cover strip may be omitted. Fig. 1 is a section of the bar showing the method of fixing the glass slabs. Fig. 2 is an elevation of reduced scale illustrating the bar and its reinforce-

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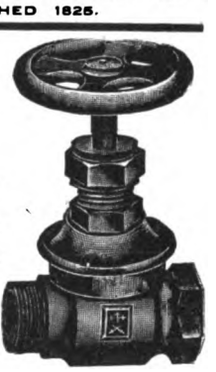
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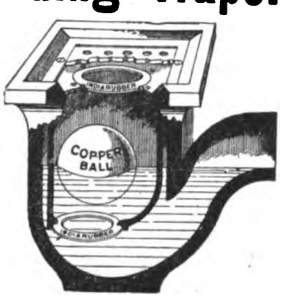
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ment. Fig. 3 is a section of the bar illustrating the method of attaching asbestos and cement sheeting. The bar *c* is formed of fine concrete and reinforced by metal bars *a*, *b*, with wire links *d* at intervals. The screwed holes *f* in the concrete may be formed by a spiral wire core *g* which is cast in a cored hole in the concrete by inserting a brass or copper screw in the coil and fixing it in the concrete; when the latter has set sufficiently the screw is eased and withdrawn, thus leaving the coil firmly embedded in the concrete and forming a threaded hole. The screws *e*, preferably of brass or copper, may pass through the cover strips *j*, and asbestos tape, felt, or other suitable material *h* is interposed between the strips *j* and bars *c* and the glass or other slabs *i*, thus forming a water-tight joint which allows for expansion, and which can be readily taken apart for renewal or repairs. The top of the bar *c* is provided with a recess c_2, and the ends of the bar with lugs c_1, to facilitate attachment of the bar to the window or other frame or equivalent part. In the arrangement shown in fig. 3, the slabs *i* of asbestos and cement or other material are fixed by screws passing through holes in them and bearing direct upon them.—Aug. 21, 1918.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 109,058 (Au. 23., 1917.—Dated under International Convention, Aug. 23, 1916).—J. H. & J. E. Crook, Selwyn Street, Remuera, Auckland, N.Z.—Raising and lowering mechanism for hinged and sliding windows.

111,667 (Nov. 19, 1917.—Dated under International Convention, Nov. 25, 1916).—T. V. Hansen, Nedre Slotsgate 3, Christiania, Norway.—Water tanks for water-closets and the like.

114,137 (Aug. 23, 1917.—Dated under International Convention, March 15, 1917).—J. E. Kiefer, 13 Avenue de la Harpe, Lausanne, Switzerland.—Bricks or building blocks.

118,297 (June 19, 1917).—John Hines, 289A Finchley Road, N.W.—Apparatus for making or repairing roads and like surfaces.

118,300 (July 18, 1917).—A. F. Berry, The Tricity House, 48 Oxford Street, W.—Electrical heating elements suitable for cooking and similar heating apparatus.

118,314 (Aug. 20, 1917).—Herbert Hunt, The Roost, Chander Hill, Holymoorside, Chesterfield, Derbyshire.—Butt hinge used in hanging doors and the like.

118,315 (Aug. 20, 1917).—D. W. Patterson, 200 Fifth Avenue, New York, U.S.A.—Fire extinguishing systems.

118,321 (Aug. 21, 1917).—Francis Biscoe-Taylor and M. J. Elliott, 221 Uxbridge Road, W. 12.—Concrete glazing bars for roofs and the like.

118,370 (Nov. 14, 1917).—The Fuller Accumulator Co., Ltd., Woodland Works, Grove Road, Chadwell Heath, Essex, and A. P. Welch, 33 Eastwood Road, Goodmayes, Essex.—Magnetic locks or fastenings for use on electric lamps or other apparatus.

118,343 (Sept. 6, 1917).—W. T. Pickston, The Cottage, Wolverhampton Road, Penkridge, Staffs.—Coal saver for domestic grates.

118,345 (Sept. 7, 1917).—J. S. Ewart, 1 Wheeler Gate, Nottingham.—Girders or joints used in the building of floors, ceilings, and the like.

Any of the above specifications may be obtained from J. D. Roots.

VARIETIES.

THE Bentley Urban Council are taking steps towards preparation of a scheme for erection of 300 houses.

GRAY'S VICARAGE, an old-fashioned house with extensive grounds, has been sold.

THE Chepstow Council have raised objection to the class of cottage which the Government are erecting at Bulwark, and requested that plans be submitted.

THE Housing Committee of the Camborne Urban Council is to meet to consider the question of housing accommodation, there being a serious shortage of houses in the district.

THE Housing Committee of the Westhampnet Rural Council are to consider the request of the New Fishbourne Parish Council for the erection of thirty cottages for the working classes.

ON the afternoon of Thursday, the 12th, a fire broke out in the basement of the premises of Messrs. Holloway Bros., builders and contractors, Vauxhall Bridge Wharf. The fire was extinguished, only small damage being done.

IT is announced that Sir Edwin Lutyens has selected the site for the war shrine which in permanent form is to take the place of the present structure in Hyde Park. The plans of the approved design are complete.

A LARGE firm of drapers, F. B. Brown, Ltd., have purchased Laurence's Temperance Hotel in Clayton Square, Liverpool. The premises of Browns have already been enlarged, but the hotel has now been purchased with the view of further extension at the close of the war.

MR. GEO. NICHOLLS, J.P., Mayor of Peterborough, has called a meeting for to-night to consider the provision of a new hospital. The Mayor considers that the present time is opportune to prepare the scheme, as existing accommodation is totally inadequate for the growing population of Peterborough.

THE Burwash Council held a special meeting last week when the question of housing accommodation was considered, and it was decided to report that the Council considered sufficient houses were provided for the district at present, there being some empty cottages now available. Houses for the widows of the fallen would have to be considered in the future.

THE Order of the Minister of Munitions, dated April 9, 1918, exempting workmen employed in the building trade from Section 3 of the Munitions of War Act, 1917 (which provides that a week's notice must be given on either side to terminate a contract of service), has been revoked. In place of it a new Order has been issued providing for the exemption from the section of all persons engaged in manual labour on building work on the ground that the circumstances of their employment are such that the provisions of the section ought not to apply to them.

A CONFERENCE on the housing question has been arranged to be held on October 1 at Sheffield, when Mr. Hayes Fisher, President of the Local Government Board, will meet representatives of the county boroughs of Lancashire and Yorkshire. Sir Noel Kershaw, Assistant Secretary to the Board, is to accompany Mr. Fisher, and it is anticipated that an important announcement will be made on the Government's housing policy.

AT the last meeting of the Sefton Rural Council Mr. A. Powlett, agent to the Earl of Sefton, addressed the members on the housing question. He stated that before the war Lord Sefton had commenced a scheme for the provision of more cottages on his estate, but the work had to be stopped, and in view of the offer of loans at a cheap rate of interest to local authorities to proceed with building workmen's dwellings, he was not in a position to say that Lord Sefton's scheme would be proceeded with after the war.

AT a special meeting of the Council of the National Union of Employers and Employed the housing schemes drawn up by the Federation of British Industries, to be put into operation in those districts where the need is seemingly most urgent, was under consideration. Representatives from among the Labour members of the Association were chosen to confer with the representatives of the Federation on the whole matter at a conference which will be held on September 24.

REPRESENTATIVES of the Federation of British Industries, of the National Alliance of Employers and Employed, and of Labour, met in conference in London on Tuesday to consider a housing scheme on broad lines in districts where the matter is urgent. The scheme considered was unanimously adopted at a morning session, and in the afternoon it was laid before the executive of the National Alliance of Employers and Employed, which approved the action of its committee. The scheme favours support of Public Utility Societies and Housing Associations, to form an addition, and not an alternative, to municipal housing schemes. Contribution in the form of loan stock would do away with the system of tied houses under which tenants occupy premises owned by their employers. The scheme would enable small employers to combine in certain districts. It contemplated having on the committee of each Public Utility Company representatives of the local trades unions, local employers, tenants, the municipalities, and social workers of the district. Model houses, gardens, allotments, and means of recreation would be provided. The Conference agreed to ask Mr. Hayes Fisher to receive a deputation before the Government housing scheme is definitely adopted.

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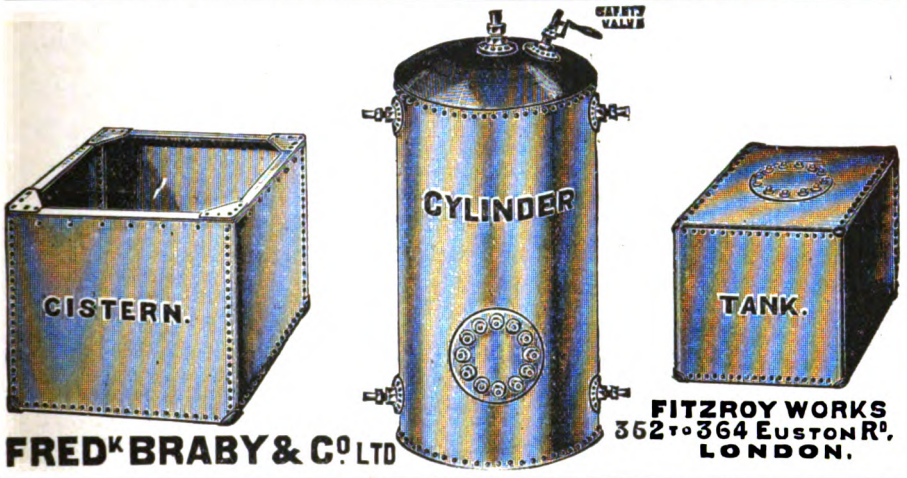
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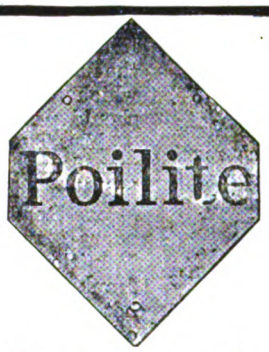
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*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than* 2 P.M. *on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

CONTRACTS OPEN.

Bedford.—Nov. 13.—For erection of buildings and reinforced concrete coal bunkers, for the Corporation. Engineer, Electricity Works, Bedford. Deposit £1.

Horbury Junction.—Oct. 12. For erection of workmen's canteen at Horbury Junction, near Wakefield, for the Horbury Junction Iron Co., Ltd. Messrs. C. H. Marriott, Son & Shaw, Church Street Chambers, Dewsbury. Deposit £1.

Stockton. Oct. 12.—For alteration of work at the maternity home, Esk House, Bowesfield Lane, for the Corporation. Mr. T. Downey, Borough Hall, Stockton-on-Tees.

At Norwich last Saturday Messrs. Knight, Frank & Rutley sold the Ashwellthorpe estate, belonging to Lord Berners. It extends to 1,127 acres, and includes Ashwellthorpe Hall. The price realised was £38,500. The Croswight estate of 634 acres (the property of Mrs. Black), including the historical ruins of Croswight Old Hall, was sold for £12,586 by the same firm, in conjunction with Messrs. Irelands.

TENDERS.

BARNES.

For supply of extra high-tension cable, for Urban District Council.

Siemens Bros. & Co., Ltd.	£885 0 0

CAMBRIDGE.

For painting at the infectious diseases hospital, for the Town Council.

Bennett & Blowers (*recommended*)	£88 10 0

CHISLEHURST.

For repairs, painting, &c., at the Council offices and adjoining stables and premises, for the Chislehurst Urban District Council.

Evitt (*recommended*)	£76 15 0

COULSDON (SURREY).

For sewer extension at Coulsdon, for the Coulsdon and Purley Urban District Council. Mr. A. Clark, acting surveyor, Purley.

H. Hemmings (*accepted*)	£1,000 0 0
Surveyor's estimate	1,142 18 8

COVENTRY.

For alterations to "Harefield," for the Education Committee.

W. H. Jones, Foleshill (*accepted*)	£463 0 0

EAST HAM.

For spare section for boiler at the swimming baths, for the East Ham Town Council.

Cannon & Sons (*recommended*)	£16 13 0

GLOUCESTER.

For tuberculosis hospital at Over, for the Gloucester City Council.

Fairby Construction Co., Ltd.	£3,562 0 0
W. T. Nicholls	1,800 0 0
W. J. B. Halls	1,711 0 0
Collins & Godfrey	1,697 0 0

Mr. Robert Airton, builder, West End Avenue, Harrogate, died on Thursday, September 26. He represented the West Ward on the Harrogate Corporation.

A new Calvary has been erected at Hardwick, Clumber Park, by the Duke of Newcastle as a war memorial. The site of the Calvary is just off the Worksop Road at the entrance to Hardwick, with a fine background of a clump of trees. The Calvary, which is built of Clipsham stone, is 16 feet 6 inches high. On the centre panel at the base of the cross has been inscribed "Rest eternal grant them, O Lord, and let light perpetual shine upon them." On the side panels are the names of the men who have fallen, leaving room for others which may have to be added, should Fate will that more should pass to the great beyond from the district.

Mr. Thomas Bates, builder, Tunbridge Wells, was summoned under the Defence of the Realm Act for carrying on building and construction work at and about the Acropolis, Eden Road, Tunbridge Wells, between the period February 1 and May 1 without a licence from the Ministry of Munitions. After evidence had been given showing that a frank explanation of the work carried out, external drainage, hot and cold water service, electric-light installations, and other work amounting to a total of £1,600, and pointing out that defendant had made a personal visit to the Ministry and explained the whole circumstances that the drainage was found to be utterly defective when other repairs were proceeding, and that part was for laying out gardens and repair to fences, &c., it was thought the matter was closed. The magistrates convicted, fining Mr. Bates, the builder, £25, and the owner, a Mr. Nicolaidi, £10.

The "South Wales Echo" states in its issue of September 27 that the Chepstow Trades and Labour Council held a special meeting yesterday evening to receive the report of the deputation appointed to inspect the much-criticised cottages at the Bulwark Garden Suburb. The deputation expressed the view that it was an insult to expect the workers to live in them as they were so small. The cottages were described as hideous and not so good as the pigstyes at the camp. In an interview with a "South Wales Echo" representative at Mounton House, Mr. H. A. Tipping, honorary architect to the Admiralty for the Bulwark and Beachley schemes, explained that there were only ten small cottages which were small and compact to meet the needs of married couples with no children. All the others, he added, were of a large type, and he felt quite sure that, when completed, the Bulwark Garden Suburb would compare favourably with any similar lay-out.

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WARMING BY RADIATION

THE special hygienic value of a gas fire is the radiant heat which it yields —heat, that is to say, which in its effects closely approximates to that of the sun's rays.

The heat rays which pass from a gas fire into a room are absorbed by solid objects; they do not directly heat the air. They warm all the solids in the room and so produce comfortable surroundings, but the temperature of the air is only gradually raised by contact with the warmed objects in the room.

The advantage of thus breathing cool air while the body is warmed will be evident to all who have experienced the relaxing effect of inhaling air that has been unduly heated. Heated air has a great capacity for absorbing water, and satisfies itself by taking moisture from the lips, nose and eyes, producing a feeling that is usually described as "dryness".

In a room heated by a gas fire there is no such discomfort, for the process of radiation sets up an air movement similar to that produced by a light spring breeze.

Gas fires provide the readiest means of producing radiation—for of the total heat given out in a room by a modern gas fire between 70 and 80 per cent is radiant—and their hygienic qualities are equalled by their efficiency and economy of fuel. The use of gas for heating means that the maximum value is secured from the coal consumed; while a gas fire need never burn to waste, and is therefore particularly adapted for use in the present period of fuel shortage

Any reader who wishes to inquire more closely into the question of the hygiene of gas fires should write for literature on this subject to the Secretary

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TRADE PUBLICATIONS.

We have received a booklet which is very well produced and illustrated, which gives every particular of the "Palladium" insulation of Messrs. Thomas Anderson, Ltd., of 53-62 Derby Road, Liverpool, and which also shows the various uses and methods in which it can be utilised. Since the establishment of the business thirty years ago, the company have carried out an immense amount of work both for large ship-owning corporations and general engineering firms. Included in this work are the s.s. Titanic, Olympic, Britannic, and other well-known ships, and a large number of H.M. Navy's vessels. Between 1910-17 they have carried out 22 million feet of insulation on over 13,500 ships, and since 1911 they have carried out 2,524,000 square feet of insulation in engine and boiler rooms, refrigerators, &c., in connection with which no repairs have been required. Palladium is finished without joints, which are a source of such trouble, and it is entirely impervious to moisture, decay and sea water, a fact proved recently in the case of a vessel which was submerged for three weeks, without causing injury to the installation. Connections and alterations can be made by the firm's employees without damage to the original work. In connection with refrigerator work, for which it will be more and more in request, it is perfectly adapted for the purposes which have to be obtained. We must refer our readers to the book for further particulars than we have space for.

A PROGRESSIVE CITY LIVERY.

On Wednesday, September 25, the Worshipful Company of Glaziers entertained at Painters' Hall a number of prominent men interested in the glass industry. The Worshipful Master, Mr. G. P. Walford, presided, supported by Sir Harry Foster, the Upper Warden; Mr. Grimwade, the Renter Warden; Mr. Percy Tippetts, the clerk; the new sheriff, Mr. Banister Fletcher, F.R.I.B.A.; Professor W. Ripper, Vice-Chancellor of the University of Sheffield; Lieut.-Col. H. K. Stephenson, D.S.O., Senior Pro-Chancellor of Sheffield University; Mr. A. J. Hobson, Junior Pro-Chancellor, and several of the University Professors. In offering a hearty welcome to his guests the chairman said that the ultimate object was to found a central body to promote the interests of the glass industry, to protect our own interests, and to ensure that we should never be again in the position of being dependent on Germany, and further, that we should be in a position to take our place to compete in foreign markets. Professor Ripper in reply gave some interesting particulars of the valuable work carried out in the laboratories at Sheffield University, and urged the need for the co-operation of the scientist, master and man, to develop such an important industry.

Lieut.-Col. Stephenson, D.S.O., said that the glass manufacturers had entered into the whole question enthusiastically, and were co-operating with the University of Sheffield, so that considerable progress had been made.

Dr. W. T. S. Turner, director of the Department of Glass Technology and secretary of the Society of Glass at the Technological University, Sheffield, gave some interesting statistics to show the progress made with the development of the industry since the outbreak of war. In regard to electric lamp moulds, he said that the present output was 30,000,000, and in the pre-war period scarcely more than 12,000,000. In another department of the industry the growth had been from nil in the pre-war period to £14,000 worth per month at the present moment, and in a third department the growth was from nil to £8,000 worth.

It will be remembered by our readers that we gave in our issue of October 20, 1916, some particulars of the valuable work of the University of Sheffield in connection with not only research work, but with actual manufacture of material of the utmost importance in connection with the war.

We congratulate the Glaziers' Company on their activity in connection with the glass industry, and the glass industry on having secured their powerful support.

KING'S FUND FOR DISABLED.

The King's Fund for Disabled Officers and Men of the Navy, Army and Air Force, opened by His Majesty with a gift of £78,000, is designed by the Minister of Pensions, the Right Hon. John Hodge, to raise a minimum of £3,000,000 to re-establish in civil life those gallant Britons who have fought and suffered for their country and civilisation. This Fund is wholly apart from any State aid, and is a voluntary monument of the nation's gratitude to our heroes who, disabled as fighters, have now to be re-established in civil occupations. The loss of limbs and other physical disabilities make the battle of life difficult for them, and the King's Fund, which is dealing with some 600 cases a week, provides grants of various sums to enable those who have given so much for us again to start life as contented, self-supporting citizens. Donations will be received gratefully by the Minister of Pensions, Westminster House, London, S.W. 1.

MANUAL LABOUR ON BUILDING WORK.

The Order of the Minister of Munitions dated April 9, 1918, exempting workmen employed in the building trade from Section 3 of the Munitions of War Act, 1917, has been revoked, and in place thereof a new Order has been issued providing for the exemption from the said section of all persons engaged in manual labour on building work on the ground that the circumstances of their employment are such that the provisions of the said section ought not to apply to them.

"Building work" in the Order means:—

(*a*) The construction, alteration, or repair of works of construction and buildings for naval and military purposes, and of buildings in which munitions work is or is intended to be carried on.

(*b*) The erection of houses for the accommodation of persons engaged or about to be engaged on munitions work.

(*c*) The construction, alteration, repair, or maintenance of docks and harbours and work in estuaries in cases where such construction, &c., is certified by the Admiralty to be necessary for the successful prosecution of the war.

(*d*) The erection of buildings required for the supply of light, heat, water, power, or tramway facilities in cases where the Minister of Munitions certifies that such supply is of importance for the purpose of carrying on munitions work.

(*e*) The construction, reconstruction, alteration, repair, decoration, or demolition of buildings, railroads, docks, harbours, canals, embankments, bridges, tunnels, piers, and other works of construction and engineering in all cases in which such construction, &c., is munitions work or work in connection therewith.

The death is announced of Mr. H. R. Atkinson, architect, who resided at Crowtstress, Barrowford.

The Mayor of Doncaster (Alderman A. Carr), himself a master builder, invited the Yorkshire Federation of Building Trade Employers, whose head quarters are in Leeds, to hold their monthly meeting at the Mansion House in Doncaster, and this took place last week. The Federation discussed proposals for fixing wages for the building industry and the formation of the Yorkshire Conciliation Board.

The Government having urged upon the Burton-on-Trent Council the necessity of providing additional housing accommodation owing to the increasing population, the committee charged with the scheme have selected a site on the Branstone Road, on which, should the recommendation be agreed to, a large number of houses will be erected. It is understood that the Government Department concerned intend to provide a recreation ground.

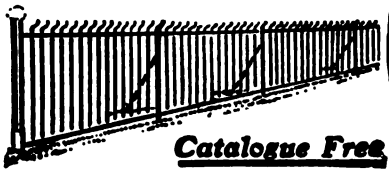
At the last meeting of the Malton Urban Council Mr. L. Tait, the surveyor, reported the result of his meeting with Mr. Falkiner from the Local Government Board and Mr. A. Hugh Douglas the agent of Earl Fitzwilliam. The offer of Earl Fitzwilliam was a field on Peasy Hill for the purpose of erecting twenty-four houses at a cost of £350. The clerk was instructed to ascertain on what terms the Earl would be prepared to sell outright, in addition to that lot, the remainder of the land on the Peasy Hill Road, which would complete the original building scheme and be sufficient to provide sites for the erection of fifty houses.

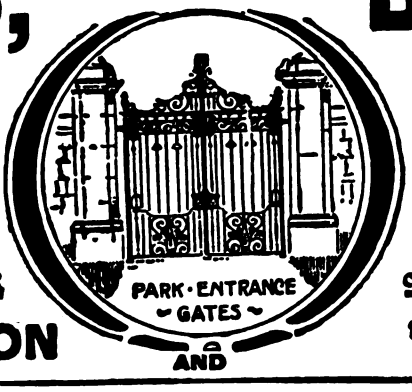
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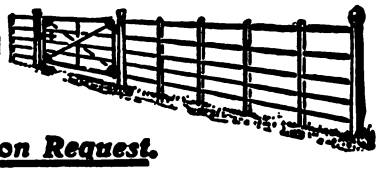
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Christ's Hospital Schools, Horsham.
Lloyd's Registry of Shipping.
Brook House, Park Lane.
Imperial Hotel, London.
Society of Architects.
Algeciras Hotel, Spain.
Orchard Hospital, Dartford.
M.R. Hotel, Manchester.
Holme Lacy, Hereford.
Old Place, Lindfield.
Gt. Chitcombe House, Brede.
The Convent, Regent's Park.
Imperial Tobacco Co., Bristol.
Offices of The Grand Trunk Railway of Canada, London.
Houses of Parliament New Kitchen.
P. & O. Steam Navigation Co.'s New Offices, London, E.C.
Alexandra House, London, S.W.
South Lodge, Knightsbridge, S.W.
Junior United Service Club, London, S.W.
Chownes Mead, Haywards Heath, Sussex.
Leys School, Cambridge.
King's College, Taunton.

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GENERAL.

The new wing which has been added to the North Lonsdale Hospital, Barrow, was opened on Saturday last.

The building operations at the Star and Garter Home for Disabled Sailors and Soldiers are to be suspended until the close of the war, caused largely by labour differences.

The Rotherham Corporation Housing Committee has recommended a housing department of the Corporation and the appointment of an architect at a salary of £500 a year.

Many new factories have been erected in the Province of Quebec, owing to the great demand for all kinds of manufactured articles. Further developments are expected since the extensions which have been made to the railway.

The workers at the factories of Messrs. Vickers at Crayford, Kent, have presented a petition to the firm for the rebuilding of the theatre which was partially destroyed by fire in December 1916. Permission is to be applied for sanction to the Ministry of Munitions.

The South Wales District of the Institute of Municipal and County Engineers met at Barry, Mr. T. W. A. Hayward, M.Inst.C.E., F.S.I., borough engineer and surveyor, Battersea, presiding. Councillor George Wareham, J.P., chairman of the Barry Council, extended the members a hearty welcome. Mr. J. C. Pardoe, A.M.I.C.E., surveyor to the Barry Council, read an exhaustive paper upon the growth and public works of Barry. A discussion ensued, and later the members were entertained by the chairman and members of the Council, and also visited the docks and railways.

At the meeting on September 26 of the Lancaster Town Council a discussion arose on the erection by a firm of builders (one of whose members is a Councillor) of small houses adjacent to a new wide roadway (to be called "Kingsway"). They were in accordance with the by-laws, and a demand was made for an early revision of the by-laws to prevent such an act of vandalism in future. On the other hand, it was declared that the houses were far better than some from which some of the critics in the Corporation were drawing rents. A scheme for a street improvement in King Street, along which the tramway runs, was discussed, and it was agreed to consider the whole scheme by the Council in Committee.

Messrs. K. Forestier Walker, Newport, David Hughes, Tredegar, and Lindon Cooper, clerk to the Monmouthshire County Council, conducted an inquiry on behalf of that body at Pontypool on Thursday, the 26th ult., into a proposal to establish a joint isolation hospital for the urban districts from Blaenavon to Cwmbran and the Pontypool rural district. Dr. Rocyn Jones, county medical officer, suggested that suitable sites for a new building existed near Trevathin, Pontypool, and also just below Pontypool Road. Mr. T. P. H. Watkins, clerk to the Panteg Urban District Council, suggested that if a decision to build was arrived at the Pontypool Road site was the more central and accessible.

When Mr. A. Hamilton Thompson, M.A., F.S.A., was giving University Extension lectures in Northampton some ten years ago excursions were arranged in illustration of his discourses on architecture. A little later the Rev. R. M. Sargeantson founded the Architectural Excursions Club, which had a large membership, and hopes to resume its interesting and pleasurable work as soon as the war ends. No group of men and women hold the late Mr. Sargeantson in more kindly regard than the members of this club, and as their memorial of a wise leader and good friend they have presented to St. Peter's Church, of which he was the Rector, a solid silver chalice and paten, replicas of the pre-Reformation altar vessels, dated 1439, at Nettlecombe, Somerset.

The following are some recent decisions given by the Committee on Production on cases referred to them by the Ministry of Labour:—Building Trade (Government work, Mid-Southern Counties.)—From first full pay in September 1918 the following rates to building trade operatives engaged on Government work in Mid-Southern Counties, east of Selsey Bill, Oxford, and Cambridge:—Tradesmen (except painters), 1*s.* 3¼*d.* an hour, painters 1*s.* 2*d.*, labourers 11¾*d.*, all plus a bonus of 12½ per cent. on earnings. Preston.—From September 6, 1918, rate of tradesmen (other than painters) to be increased from 1*s.* 3*d.* to 1*s.* 4*d.* an hour; rate of labourers from 11*d.* and 11½*d.* to 1*s.* and 1*s.* 0½*d.* an hour. Maidstone.—From first pay after September 4, 1918, hourly rate of carpenters and joiners to be 1*s.* 1*d.*, painters 1*s.*, and labourers 10*d.* Tyne and Blyth District.—From first pay after September 1, 1918, bricklayers an advance of 1½*d.* an hour, making hourly rate of 1*s.* 3½*d.*, plus bonus of 12½ per cent. on earnings. Engineering Trade (Birmingham and District).—Rates of pattern makers aged twenty-one and over increased by 2*s.* a week. Boilers coverers and shop hands.—Advance of 3*s.* 6*d.* a week, and youths under eighteen years half this amount.

Mr. Ross Young, Chief Housing Inspector of the Local Government Board, recently held an informal meeting with members of the Inverness Town Council with reference to the housing of the working classes after the war. Mr. Young said it was thought that after the war housing would be proceeded with in such a way as would rapidly make up the arrears which had been partly due to the war stopping all building activity. In a circular sent to the local authorities last March, the Government set forth that they would be prepared to meet any deficit on after the war-housing schemes that might be approved by the Local Government Board. The Government would advance 75 per cent., leaving to local authorities to meet the remaining 25 per cent. There could be no question they had a case for housing in Inverness, even although the population remained stationary. They had a large number of houses which, owing to their congested situation, must in time be closed down. In the past local authorities had depended more or less on private enterprise for providing the houses necessary to accommodate the working classes. For some years, however, before the war, private enterprise, finding house building unremunerative, had almost ceased to build. The number of houses required was always getting greater. The Government, viewing the problem along those lines, hoped that local authorities would go forward in the matter. The Local Government Board hoped the Town Council of Inverness would prepare and formulate a scheme immediately after the war terminated, or as soon after the close of the war as it would be possible to do so. With regard to the type of house, it was hoped to erect a fully better class of house than in the past.

The annual meeting of the East Riding Antiquarian Society was held on Monday, September 23, at Beverley, and was the first meeting which has taken place since 1915. It was preceded by a visit to St. Mary's Church, where a most interesting address was delivered on its architecture and its history by Mr. John Bilson, F.S.A. St. Mary's, the daughter church of the famous Minster, is a glorious piece of architecture—a clash of styles and periods—and Mr. Bilson, who for twenty-five years has made a special study of the subject, traced its growth from the primitive twelfth-century chancel, through half-a-dozen building campaigns, to the completion of the north chapel, which he said was amongst the finest architectural achievements of its time, and one of the most beautiful pieces of mediæval work in the kingdom. The oft-published statement that it was the work of Flemish artisans he described as a blunder, and quite absurd. It was wildly improbable, he said, that any Flemish masons were imported into Beverley in the fourteenth century. There could be no doubt that the design of this chapel was purely English. For an hour and a half Mr. Bilson held his audience in the nave of the building while he told his story of the part which was played by this church in mediæval days. The position of St. Mary's as the town church of Beverley is indicated, he said, by its connection with the Town Guilds. The distinguishing mark of a separate craft, or "gild," was a separate light in one of the churches, a separate castle at the Rogation procession, and a separate scene or pageant at the Corpus Christi play. On the Monday in Rogation week the shrine of St. John of Beverley was carried from the Minster to St. Mary's Church, and on the next day to St. Nicholas, Holme. The craft guilds first viewed the procession sitting in livery in wooden castles in the streets, and, on its return, rode after it on horseback. The pageant and play on Corpus Christi Day were managed by the Corpus Christi Guild, who headed the procession, followed by the religious guilds. The great Guild of St. Mary held its festival on the Feast of the Purification with a splendid pageant, in which the sisters of the Guild followed a representation of the Virgin, the brethren coming after with music and gladness, each carrying, according to custom, a wax candle weighing half-a-pound. From the published ordinances of the craft Guilds of Beverley it would seem that a much larger number of them had their Guild light in St. Mary's than in any other church in the town. The goldsmiths had their light of St. Dunstan and a candle before the image of St. Christopher in the nave; the butchers had their yearly mass in the church of the Franciscan Friars; and the porters and crelers in the church of the Dominican Friars. The millers had their light in St. Nicholas Church, and eight other craft guilds had their guild lights in St. Mary's. They were the weavers, the drapers, the saddlers, the barbers, the cutlers and braziers, and the tanners.

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SUPPLEMENT—PAGE II
THE
Architect and Contract Reporter.
FRIDAY, OCTOBER 11, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

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CONTRACTS OPEN.

Bedford.—Nov. 13.—For erection of buildings and reinforced concrete coal bunkers, for the Corporation. Engineer, Electricity Works, Bedford. Deposit £1.

Chester.—Oct. 14.—For painting and decorating the children's home, Wrexham Road, Chester, for the Guardians. Mr. G. S. N. Hull, clerk to the Guardians, Chester.

Dunstable.—Oct. 15.—For facing portion of the filter walls at the sewage farm, Chalk Hill, near Dunstable, with Staffordshire bricks, for the Corporation. Mr. W. F. Wilkins, borough surveyor.

Horbury Junction.—Oct. 12.—For erection of workmen's canteen at Horbury Junction, near Wakefield, for the Horbury Junction Iron Co., Ltd. Messrs. C. H. Marriott, Son & Shaw, Church Street Chambers, Dewsbury. Deposit £1.

Nottingham.—Oct. 28.—For cleaning and painting the military hospital, Bagthorpe, for the Guardians. Mr. Ernest R. Sutton, F.R.I.B.A., Nottingham.

Stockton.—Oct. 12.—For alteration of work at the maternity home, Esk House, Bowesfield Lane, for the Corporation. Mr. T. Downey, Borough Hall, Stockton-on-Tees.

TENDERS.

BELFAST.

For supply of station plant, for the Corporation Electricity Committee.

Accepted tenders.

British Thomson-Houston Co., Ltd., two 6,000-kw. turbo-generators, with condensing plant, &c., and one 300-kw. balancer booster, £74,839.

Stirling Boiler Co., four 48,000-lb. water-tube boilers, &c., four fuel economisers, two steel chimneys, &c., £82,516.

Holden Brook, Ltd., two electrically driven boiler-feed pumps, £1,565.

Tudor Accumulator Co., accumulators, £4,414.

Vicars, Ltd., rotary converters, £30,613.

Siemens Bros., static transformers, £9,162.

BOSTON.

For rebuilding Parson's Bridge over the North Fortyfoot Drain in Holland Fen, for the Highways Committee.

J. W. Pinder, Boston (*accepted*) . . £1,400 0 0

BRAINTREE.

For supply of granite, for the Urban District Council.

Jees Hartshill Granite Co. (*accepted*), £19 17*s.* 9*d.* per ton.

NEWMARKET.

For painting at the outfall works, for the Urban District Council.

T. H. Wiseman (*accepted*) . . . £40 0 0

PEWSEY.

For installation of a heating apparatus at Pewsey school, for the Wilts Education Committee.

Crispin & Sons (*accepted*) . . . £147 13 6

PRESTON.

For installation of a weighbridge at the cattle market, for the Corporation.

H. Pooley & Son (*accepted*) . . . £185 0 0

SALFORD.

For the supply of a Lancashire boiler required at the Liverpool Street gasworks, for the Corporation Gas Committee.

Galloways, Ltd., Manchester (*recommended*) £905 0 0

SWINDON.

For alterations, painting, &c., at the education offices, 22 Regent Circus, for the Swindon Education Committee.

H. C. Cook (*accepted*) £119 0 0

For supplying heating boiler and for removing old and fixing new one at the technical school, for the Swindon Education Committee

G. N. Haden & Sons, Trowbridge (*accepted*) £293 0 0

For electrically wiring education offices at 22 Regent Circus, for the Swindon Education Committee.

L. Howell (*accepted*) £68 0 0

Damage to the extent of £20,000 was caused by a fire which broke out in Oswald Street, Glasgow, on Saturday night.

At the last meeting of the Prudhoe Urban Council the Housing Committee reported in favour of a building scheme by the Council of 100 houses. The report was adopted.

The Committee for the purpose of establishing a cottage hospital in the Halesowen district have arranged to purchase Mount House and grounds situated at Muchlow's Hill to be opened as a hospital.

Mr. Sporr, of the Local Government Board, has requested West Penwith (Penzance) Rural District Council to reconsider their position under the Government's after-the-war housing scheme, and to submit a proposal for building in needy parishes to the Board. The Council promised to comply.

The Wragley Road housing scheme, Lincoln, of which there has been some local criticism, is proceeding. Some particulars are given in "The Lincoln Gazette." The number of houses being erected is 200, and they are of various sizes. One class contains parlour, 11 feet by 10 feet; living room, 12 feet by 13 feet; scullery, 8 feet by 7 feet 6 inches; first bedroom, 12 feet 11 inches by 13 feet 2 inches; second, 11 feet by 8 feet 9 inches; third bedroom, 14 feet 3 inches by 7 feet 6 inches. Others are slightly smaller, and there is another class slightly larger. The position is a healthy one, and at a convenient distance from the several works situated in the district.

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Salt water and many acids have no effect on Kuredamp. It dries on tar. Damp or newly plastered walls can be painted or papered within six hours.

KUREDAMP, in addition to its damp-resisting qualities, is the most perfect combined **Thinner** and **Dryer** on the market, and when so used with white lead substitutes, or any stainers, the resulting paint is absolutely waterproof, weather-proof, and infinitely superior in every way to best lead paint. It is especially suitable for outside use.

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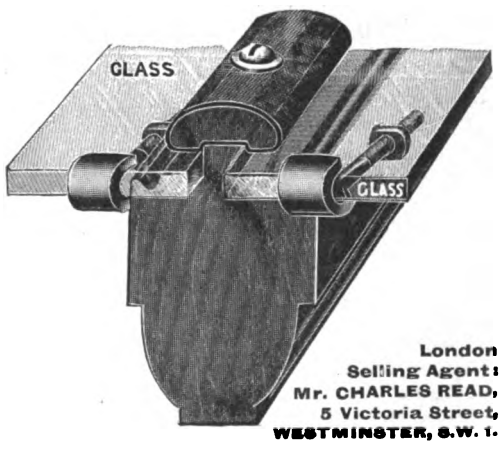
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BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 117,865 (Oct. 20, 1917).—Building blocks.—Lieut. J. W. Ferrier, Canadian A.S.C., 24 Bernard Street, London, W.C.—The object of this invention is to construct a building block having means for applying a lath and plaster surface or the like directly thereto, and in such a way as to leave an air space, or spaces, behind the lath and plaster layer. A block is constructed having a solid side, from which, on the side facing the interior of the building, project a series of arms or brackets made in the same material and integral with the solid portion of the block, and having embedded therein a strip of timber or equivalent material which bridges the space between the arms or brackets. By reason of the arms having spaces between them in the vertical direction, it will be seen that the air spaces behind the lath and plaster layer will not only be continuous in a vertical direction but also in a horizontal direction, and a very effective body of air is thus enclosed in the wall, which air can also circulate from one part of the wall to another without restraint, and gratings may be introduced for the admission of air to the wall, either from the internal or external side. Fig. 1 illustrates a building block. Fig. 2 is a perspective view showing a number of these blocks bonded together to form a wall. Fig. 3 shows a modification of the block when used at a corner. Fig. 4 shows

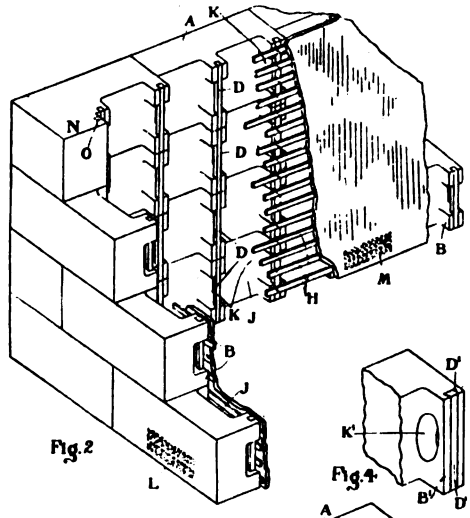


Fig. 2.

Fig. 4.

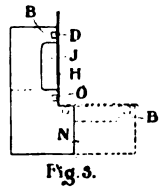


Fig. 3.

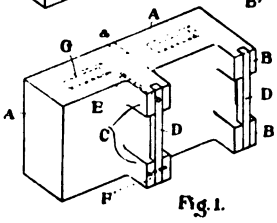


Fig. 1.

a dovetail method of securing a timber strip. A represents the solid side of a block, B, B being outstanding arms which are flush with one end of the block, and C, C are arms situated approximately about the centre of the side of the block. Across the arms B and C a timber strip D is carried, being retained in place when the block sets either by means of the metal reinforcing pin E, or the cross pin F, which in the former case also serves to strengthen the arm C as regards its attachment to the main side A. The timber strip may be retained in place by means of a dovetail form D^1, as shown in fig. 4. The arms B in this figure are replaced by a continuous bracket B^1, through which the hole K^1 is formed in order that the vertical spaces J may communicate with each other. Depressions such as G may be formed in the tops or bottoms of the block at which the joints are made. The dotted line *a*, fig. 1, is shown to indicate that the block may be formed in two parts there. Referring to fig. 2, it will be seen that a series of blocks such as A are laid together with their ends bonded as in the case of ordinary brickwork, but that by locating the arms C, B, as shown in fig. 1, these will come together in such a way that a continuous line of strips D is formed from top to bottom of the wall, and that to these vertical strips D horizontal strips such as H, H may be fastened by ordinary nails or screws over the whole surface of the wall. To these series of horizontal laths a plaster coating may be applied in the ordinary way, a wall being thus formed which has a solid exterior, a substantially continuous space over all its surface, and a continuous layer of plaster forming the interior surface of the wall. The spaces such as J in the vertical direction would usually be continuous from top to bottom, while those K bridged by the strips D may be continuous from one horizontal end of the wall to the other, or the arms B may be formed as a substantially continuous bracket B^1, fig. 4, with holes such as K^1 through them. A grating such as L may be used to admit air to the space K, or a similar grating M may be used from the inside of the partition. In the corner of the wall the block, instead of being moulded as shown in fig. 1, is moulded as shown at N in figs. 2 and 3, that is, with a solid portion added to the side wall portion, and is constructed preferably with a timber strip O running along the projecting solid corner, which adjoins a similar strip in the same position upon the corner block next beneath it. These strips O allow of the cross laths H being fastened close to the corner on the interior surface of the wall.—Aug. 14, 1918.

GENERAL.

The Rochdale Education Authority have under consideration a scheme for the erection of an open-air school for delicate children, at a cost of from £3,000 to £3,500.

A sum approaching £6,000 has been collected towards the cost of erecting homes for disabled soldiers and sailors at Worcester.

The Luton Town Council have obtained sanction to borrow for the extension of their electricity undertaking a sum of £77,686.

The Halifax Corporation have sanctioned a scheme for the erection of a national kitchen and restaurant on a site in Bull Close Lane at a cost of about £3,500, with a further £1,000 for equipment.

All woodworkers employed on approved work for Government Departments, whether on building work or munitions, are to be granted protection certificates, the age limit being fixed at twenty-nine for Grade 1 men and at twenty-four for Grade 2.

It was reported to the Witham Urban Council that the Charity Trustees agreed to dispose of Bell Field for £530 for building purposes subject to the approval of the Charity Commissioners.

The business of ironfounders, heating engineers, &c., carried on by the Albion Iron Co., 181 Upper Thames Street, E.C., has been acquired by a new company—the Albion Iron Co. (London), 1918, Ltd.

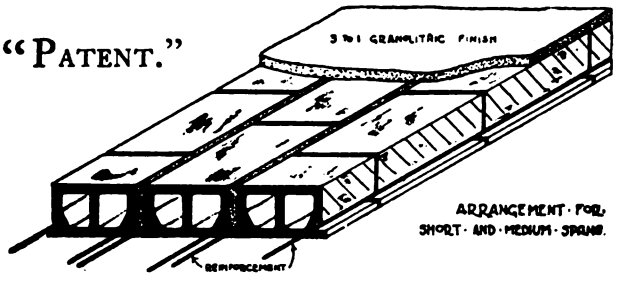
The Horwich Urban District Council have decided to make application to the Local Government Board for sanction to borrow £1,230 for the purchase of Lower Brazley estate and £1,000 for the purchase of land from Lord Leverhulme for the purpose of erecting workmen's houses.

The Stoke Corporation have had under consideration a proposal to use the abattoirs at Hanley for Government slaughtering, and the alterations and improvements necessary to render the premises suitable for the purpose, and have decided to approve plans submitted by the borough surveyor for carrying out the proposed alterations. The estimated cost of the scheme is between £6,000 and £7,000.

The Leeds and District Federation of House Builders have communicated with the Leeds City Council, asking for a postponement of the scheme for the acquisition of land for housing purposes, and suggesting that the City Engineer should prepare a list of the numerous areas of building land within the city already sewered and kerbed and ready for building thereon. The Federation point out that the Corporation have large sums of money sunk in the cost of sewers in such land, which sums are adding to the original cost in interest and other charges, and contend that there are sufficient estates already laid out to provide accommodation for some time to come, most of them being in convenient positions for the erection of working-class dwellings, and easily accessible by the present tram service.

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Used throughout on the New Police Station —— H.M. Factory, Dornock, Gretna.

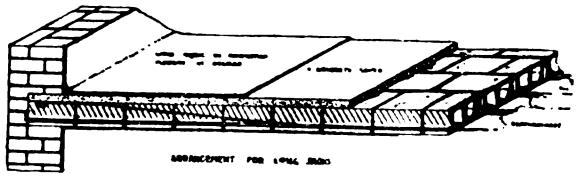
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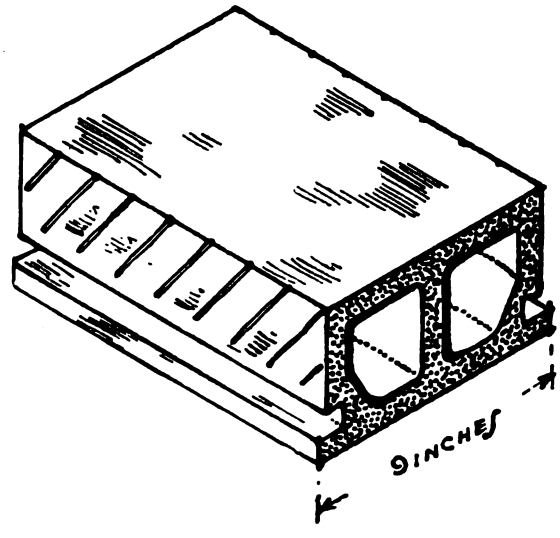
OFFICIAL TEST.

At the H.M. Factory, Gretna, a section of floor was selected at random and gradually loaded to four times the guaranteed safe load, up to which load there was no sign of deflection; after this the load was gradually increased to eight times the safe load, by which time there was 3" deflection. Two of the joints and one of the blocks had cracks on the underside but no collapse of the floor, even with an eight-fold load. The load was then gradually removed and the deflection decreased to 1½", leaving a still comparatively good floor, thus conclusively showing the great reserve of strength in our floors. This section of floor had only been constructed 14 days.

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The above illustration shows arrangement for long span.



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PERSONAL ITEMS.

The will has been proved of the late Mr. William Frederick Yeames, R.A., at £5,810.

The late Mr. Alfred Ridley Bax, F.S.A., left estate valued at £281,683, with net personalty of £109,728.

Captain C. F. W. Marsh, surveyor to the Orsett Rural Council, who is on service in Salonica, is reported missing.

The late Mr. Thomas Aitken, M.I.C.E., road surveyor, Cupar, left £5,902.

The death is announced of Mr. Henry Bruce, senior partner of the firm of Bruce & Proudfoot, civil engineers, of Cupar, N.B.

On Thursday of last week the last stone in the restoration of the south-west pier of St. Paul's Cathedral was placed in position by Canon Alexander, the treasurer to the Chapter. This completes, after five years' work, the first stage in the work of preservation.

Second-Lieutenant David Milne, Essex Regiment, is reported killed in action on September 21. He was the son of the late Mr. David Milne, of Dundee, and prior to joining up was in practise as an architect and surveyor at Priory Place, Doncaster. He resided with his wife and family at Lawn Road, Doncaster.

Mr. Peter Gaskell, architect and surveyor, has been selected as Lord Mayor of Hull for the forthcoming year. Mr. Gaskell is a member of the Society of Architects and of the Institution of Municipal and County Engineers, and is a licentiate of the Royal Institute of British Architects, and specialises in the design of cold-storage buildings and installations.

Mrs. Pearson, Minckip, Boroughbridge, has received information that her husband, Private H. W. Pearson (Leicester Regiment), has been wounded in the left shoulder and back, and is in hospital in Scotland. Private Pearson joined the army in November 1914, previous to which he carried on business as a builder and contractor.

The death has taken place of Mr. Chas. Chree Doig, architect and civil engineer, of Elgin. Mr. Doig was a native of Forfarshire, and went to Elgin about forty years ago, becoming a partner in the firm of M'Kay & Doig, architects and civil engineers. Mr. Doig's eldest son, Major H. Doig, who was associated with him in the practice, is a prisoner of war in Germany.

The death has taken place of Mr. David Thomas, of Cruglas, Gnoll Park Road, Neath, the well-known colliery engineer and surveyor, in his ninety-first year. Mr. Thomas, who occupied many importance positions in the mining industry and was responsible for a number of valuable patents in connection with mining, was engaged by the late Mr. David Davies to make the survey for the railway from Rhondda to Port Talbot, and it was largely attributable to his report that the Rhondda and Swansea Bay Railway was built. He leaves one son, Mr. Clason Thomas, A.M.I.C.E., engineer to the Neath Rural District Council, and two daughters.

Second-Lieutenant (Temp. Capt.) C. A. Stevens, M.C., of the West Riding Regiment and R.F.C., eldest son of the late Mr. Alfred Stevens, of the firm of Stevens & Adams, Victoria Works, Point Pleasant, Wandsworth, S.W., has been awarded a bar to his Military Cross for conspicuous gallantry and devotion to duty as a leader of numerous raids. On one occasion he led ten machines a distance of 130 miles from his aerodrome, obtaining good results. During all the raids in which he has acted as leader he has lost only one machine, and has invariably given a splendid example of courage. His characteristic skill and determination has had an admirable influence on his squadron. The gallant young officer is nineteen years of age.

BUILDING MEMORANDA.

It is proposed to erect a new church, schools, and presbytery for the parish of St. Peter's, Athlone.

The Belfast Harbour Board are about to erect a wooden quay at the new electric station.

Southport bricklayers have received an advance from 1*s.* 3*d.* to 1*s.* 4½*d.* an hour, and joiners from 1*s.* 2*d.* to 1*s.* 5*d.*

The Sheffield city architect has reported that the contract with Associated Builders, Ltd., for the erection of 261 houses at Wincobank has been settled.

Considerable damage was done to the upper mill of the Whitehouse Spinning Co., Belfast, by fire last week. Two large engines and other accessories necessary for the working of the mills and factory were badly damaged.

At the Hallaton District Council meeting held on Friday last a plan was submitted by the surveyor for alteration to the corner near the church. It was resolved to submit it to Mr. Price Dent for his approval

Tenders are invited for the rebuilding of the Glady Lower Bridge on the road from Cushendall to Glendun Viaduct, and the erection and furnishing of a national school building at Ballinacurry, Glymsk, Co. Galway.

A scheme is being prepared for the extension of St. Edmund's College Secondary School, Colquitt Street, Liverpool. The sum of £6,000 is required, which it is hoped to raise by public subscription.

On Thursday night, October 3, the premises of Mr. Colin Macandrew, Lauriston Gardens, Edinburgh, builder and contractor, were destroyed by fire. The loss is estimated at £10,000. The premises were surrounded by small dwelling houses, several of which were damaged by fire and water.

The Bootle Town Council has agreed to purchase from the Earl of Sefton at a sum of £32,825 freehold land of just over 50 acres fronting Watts Lane, Park Lane, Orrell Lane, and Alexandra Drive, through which a main road is to be made to join up Linacre Lane with Ford Station.

The Government, through the Department of Overseas Trade, are embarking upon another investigation abroad. This time they have agreed to share the cost with the British Engineers' Association of an investigation into the prospects for the engineering industry in Brazil. The investigator, whose name will be announced very shortly, will spend probably twelve months in Brazil, and his reports will cover the whole field open to engineering enterprise.

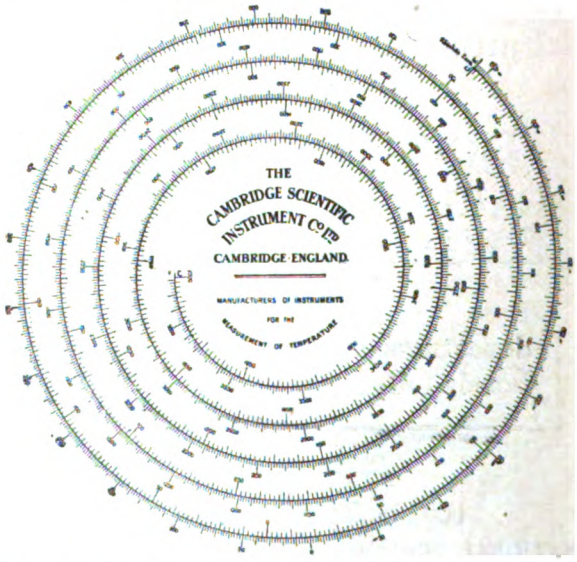
At the last meeting of the Leeds City Council the time was mainly occupied with projects for housing of the working classes, the schemes under consideration being those of the Middleton and Hawkesworth Wood estates. In connection with the former, approval was given by 32 votes to 18 to the purchase by the Development Committee of Sissons Farm, an approximate area of 57 acres 8 perches (with minerals thereunder), at the price of £110 per acre, subject to the requisite Parliamentary and borrowing powers being obtained (including powers for incorporating the township of Middleton with the city). The Development Committee further recommended the purchase from Messrs. B. Whitaker & Sons, Ltd., of about 63 acres of land at Hawkesworth Wood, Kirkstall, at the price of £300 per acre, subject to the vendors making arrangements for the provision of a road 50 feet wide through the land between the property at the south-east corner of the estate and Vesper Road, Kirkstall.

TRADE NOTES.

The British Uralite Co. (1908), Ltd., have removed their offices to 8 Old Jewry, London, E.C. 2, where all communications should be addressed.

In consequence of the rapid growth of their business as manufacturers of concrete machinery, Messrs. Winget, Ltd., have added a North of England office to their numerous branches at home and abroad. The address is 40 Albert Road, Middlesbrough, where Messrs. Winget's late secretary, Mr. Calvert Griffiths, acts as manager.

The Cambridge Scientific Instrument Co., Ltd., of Cambridge, have prepared a temperature conversion table, of which we give an illustration. The table is printed on



cardboard to be hung up in works or laboratory for easy reference. It is produced in convenient size and clearly printed.

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PERFECTION IN ROOFING

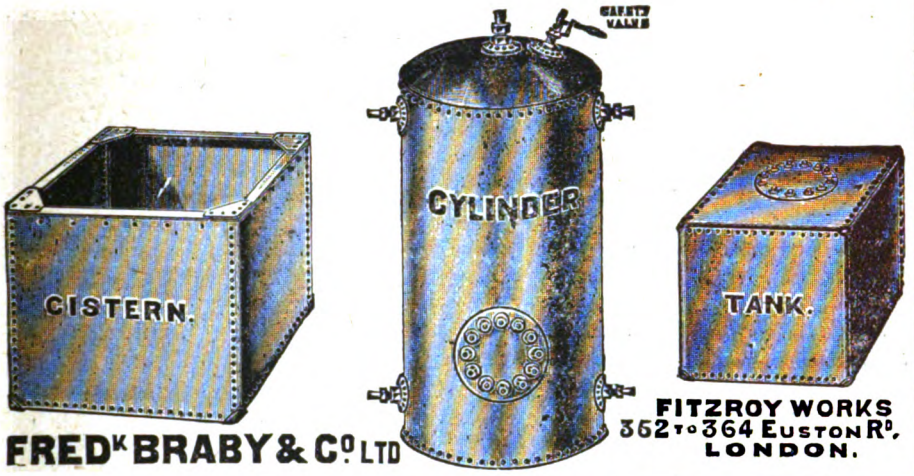
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Architect and Contract Reporter.
FRIDAY, OCTOBER 18, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

**** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

CONTRACTS OPEN.

NOTTINGHAM.—Oct. 28.—For cleaning and painting the military hospital, Bagthorpe, for the Guardians. Mr. Ernest R. Sutton, F.R.I.B.A., Nottingham.

WIGAN.—Oct. 21.—For construction of concrete and brick culvert at the electricity works, Wigan, for the Corporation. Mr. R. B. Donald, A.M.I.C.E., borough engineer, Wigan.

TENDERS.

CAPE TOWN.

For wiring for electric lighting "Leeuwenhof," the Cape residence of Mr. Isaac Lewis, Johannesburg.
E. A. Shaw & Co. (*accepted*) . . . £484 0 0

GOSPORT.

For painting northern side of isolation hospital, for the Urban District Council.
Habens (*accepted*) £35 0 0

For painting exterior of fire station, for the Urban District Council.
Rapley (*recommended*) £31 16 6

HYTHE.

For supply and delivery of about 690 lineal yards of 8-in. cast-iron socket pipes and specials to B.S. specification, for the Town Council. Mr. J. Green, M.I.C.E., borough engineer.
Staveley Coal and Iron Co., Ltd. (*accepted*) £14 1 6

JOHANNESBURG.

For supply of one 500-kw. direct-current generating set, and one 400-kw. ditto, for the Town Council.
Langlaagte Estate and Gold Mining Co., Ltd. (*accepted*) £6,000 0 0

LUTON.

For extension of electricity station buildings, for the Town Council.
T. & E. Neville (*accepted*) . . . £4,297 0 0

SALFORD.

For installation of heating system at St. Sebastian's School, for the Managers.
J. H. Gilbody, Manchester (*accepted*) . £85 0 0

SOUTH SHIELDS.

For erection of mortuary, for the Corporation.
G. Thornton (*accepted*) £302 0 0

WEST CHILTINGTON (SUSSEX).

For painting and repairs at West Chiltington schools, for the West Sussex Education Committee.
E. Wadey, Billingshurst (*accepted*) . . £27 15 6

The Rural District Council of Axbridge have decided to appoint an architect to prepare a housing scheme.

The Taunton Town Council have purchased the four acres adjoining the Kingston and Cheddon Roads for the sum of £1,000.

The Hull City Council have accepted an offer by Mr. C. Pickering to purchase eighty acres of land at a cost of £450 per acre as a site for a housing scheme, which it is estimated will approach a sum of £400,000, as mentioned in a previous issue. It is understood that the Council contemplate other schemes.

Very important developments are contemplated by the Government with reference to forestry, including the planting up of woodlands and afforestation of waste land after the war, which will be of special interest to Westmorland, Cumberland, North Lancashire, and West Yorkshire.

The death took place last week of Mr. James Wylie, builder and contractor, of Terregles Avenue, Maxwell Park, Glasgow, age fifty-eight. On behalf of the Corporation the clerk, Sir John Lindsay, and Mr. Thomas Nisbet, city engineer, attended the funeral.

In connection with the Droylsden Council's housing scheme it was reported at the last meeting of the Urban District Council that plans for a garden estate were received from a Manchester firm of architects, with a request that they should be appointed architects, but the Council decided that Mr. Charles Hall, the engineer and surveyor to the Council, be appointed architect and that his salary be adequately advanced to remunerate him for his services during the progress of the scheme.

At a County Council inquiry at Scunthorpe into the proposals of the Scunthorpe Urban District Council and the Brigg Rural District Council as to the amalgamation of what is known as the Ironstone area of North Lincolnshire, it was stated that arrangements were being made rapidly for housing accommodation, and that 698 acres had already been acquired, while negotiations were in progress for another 500 acres. The War Cabinet had already under consideration plans for 2,000 houses, railway sidings, &c., for the building of these houses, and the sanction of the Government was expected any time. A total expenditure of over £2,000,000 is involved.

Captain Gerald M. Hedley, R.E., who died in hospital at Rouen on October 4, was a son of the late W. H. Hedley and Mrs. Hedley, of Windsor, and brother of the Rev. P. Hedley, Chaplain to the Forces, formerly curate of St. Bartholomew's, Armley, Leeds. Captain Hedley joined the Middlesex Regiment in August 1914 as a private, and later held a commission in the A.S.C. until September 1915, when he transferred to the R.E. He served in Italy, and in October 1917 was awarded the Crown of Italy Medal for military valour, and he was also mentioned in despatches in the following December. A few days before his death he was appointed staff captain. He was born in 1885, educated at Durham School, and served his time as an architect with Messrs. Oliver, Leeson & Wood, Newcastle-on-Tyne. Afterwards he was in partnership with Mr. Douglas Pollock, M.A., in London.

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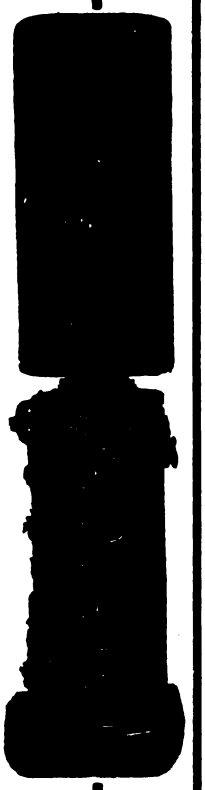
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PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 113,279 (Feb. 5, 1918.—Dated under International Convention Feb. 6, 1917).—General Briquetting Co., 25 Broad Street, New York, U.S.A.—Machines for the manufacture of briquettes.

115,803 (Jan. 21, 1918.—Dated under International Convention May 14, 1917).—J. S. Surbaugh, 808 North 5th Street, Vincennes, Knox, Indiana, U.S.A.—Shovels, scoops, spades, and like implements.

118,423 (June 18, 1917).—C. W. Winterbotham, 107 South Road, Brighton Beach, Victoria, Australia.—Electrically heated stoves.

118,433 (Aug. 21, 1917).—F. C. Bargar, 505 Buttles Avenue, Columbia, Ohio.—Fire extinguishers.

118,436 (Aug. 24, 1917).—Bowden Wire, Ltd., and Preston Davies, Bowden Works, Victoria Road, Willesden Junction.—Bunsen burners.

118,442 (Aug. 27, 1917).—P. N. Nissen, Lieut.-Col., c/o The Institute of Mining and Metallurgy, 1 Finsbury Circus, London.—Portable buildings.

118.443 (Aug. 27, 1917).—J. J. Bywater, Star Inn, Middle Street, Beeston, Notts.—Pipe or rod cutters.

118,450 (Aug. 28, 1917).—Joseph Ruzicka and Frank Kubory, Petersburg, Dinwiddie, Virginia, U.S.A.—Wagons for collecting and conveying ashes.

118,482 (Sept. 18, 1917).—M. C. Rimmer, 26 Thavies Inn, Holborn Circus, E.C. 1.—Apparatus for distilling and sterilising liquids, especially water.

BUILDING MEMORANDA.

New engineering works are to be erected at Newport, Mon., for Messrs. Gould's Foundries, Ltd., of Barry Docks.

A piece of land to the extent of 7½ acres in Castle Fields, Shrewsbury, has been purchased for the purpose of erecting workmen's cottages.

A new vestry at the S.E. corner of St. Paul's Church, Sheffield, is to be built as a memorial to the late Canon Gilmore.

Mr. Ernest W. Heald, of Phœnix House, Chorley, managing director of Mr. John Heald, Ltd., engineers, Phœnix Foundry, died last week, aged forty-eight years. He had been suffering from ill-health for some time.

A war memorial fund has been opened to commemorate the death of officers who have fallen in the war who have passed through Sandhurst; it will take the form of enlargement and decoration of the R.M.C. church, and the architect appointed to carry it out is Captain Arthur Campbell Martin, F.R.I.B.A., R.M.C.

New works are being erected in Launceston, Tasmania, by Mr. James Gitsham, of the G.M.C. Syndicate, for the purpose of the manufacture of white-lead paint, with a view of securing the markets of Tasmania, Australia, and New Zealand. It is hoped that manufacture will be in progress by the New Year.

The Greasborough Urban Council have unanimously decided to erect a public hall with suitable office accommodation on a site presented by Major the Right Hon. Earl Fitzwilliam, D.S.O. On the same site is to be erected a war memorial to the memory of local men, soldiers and sailors, who have fallen and served in the war.

The Western District Committee, Haddington, received reports from the sub-committee on housing suggesting as a readjustment the allocation of new houses to the various parishes as follows:—Aberlady 16, Athelstaneford 18, Bolton 4, Dirleton 24, Garould 4, Gladsmuir 24, Haddington 8, Moreham 4, Ormiston 24, Pencantland 16, Humbie 6, Saltoun 6, Prestonpans 14, Tranent 20, Yester 12.

At Airdrie Dean of Guild Court plans were passed for the restoration of the premises of R. R. Cowan, Ltd., pawnbrokers, Broomknoll Street, and of Sellar & Co., drapers, which were destroyed by the recent fire. Lining was also granted for the conversion of part of the Burgh Police Buildings in Wellwynd Street into a station for the new fire brigade for the burgh, and also for the housing of the ambulance wagon.

The Glasgow Corporation have approved a scheme for the erection of 7,000 dwelling houses in various parts of the city. In the case of cottages the plans provide for twelve houses per acre and twenty-four houses per acre in two-storey blocks. This is the first instalment of a scheme for 47,000 houses, but the work cannot be proceeded with until after the war.

The proposal to erect a city hall for Sheffield was considered by a committee of Sheffield Town Trustees this week. It was decided to recommend the Trustees not to oppose the Bill which the City Council intend to promote, and by which they hope to obtain powers to acquire compulsorily land in Barker's Pool, on which to erect the City Hall. The Town Trustees are owners of portion of the land which the City Council desire as a site for the hall. The recommendation of the committee will be considered by the Trustees at their meeting on November 11.

A novel point was raised at Wolverhampton Local Tribunal as to the building trade, which is included in the new list of certified occupations. Could a stonemason employed by a cemetery company in the building and repairing of vaults be regarded as coming under that classification? Mr. Brevitt (National Service Representative) contended that the man was not protected. The Chairman (Mr. Loftus B. Moreton) quoted from the official document the description of the trade as "including decorating, painting, renovating, or repairing of houses or other buildings." Mr. Brevitt thought this was straining it too far. He did not agree that it was a certified occupation. The Court ruled otherwise, and renewed the man's exemption.

The Women's Housing Committee of the Ministry of Reconstruction, presided over by Lady Emmott, have issued an interim report. They regard it as essential that each house should contain as a minimum three rooms on the ground floor (living room, parlour, and scullery) and three bedrooms above, two of these being capable of containing two beds, while larder and a bathroom are essential. It cannot be too strongly emphasised that a regular and efficient hot-water supply is a "sine qua non" from the point of view both of personal cleanliness and of labour saving. We take it for granted, continues the report, that a garden will be attached to every house. We welcome the provision that not more than twelve houses should be built to the acre, in order to allow space not only for good-sized individual garden, but also for a common playground for each considerable group of houses. The committee also advocates self-contained cottages for families, while some cottage flats might be provided for old people, childless couples, and single persons.

Private J. Milton, formerly a junior in office of the borough surveyor, Ealing, S.W., has been killed in action.

It is proposed to turn the workhouse at Ballymoney, Ireland, into a factory.

With reference to our note in issue of October 4 of the appointment of an architect for the housing scheme for Rotherham, the estimated number of houses is 1,000.

The need for a new church at Egham, Hythe, is contemplated; a fund to provide a permanent and fitting building is being raised.

A new church at an estimated cost of £7,000 is being erected by the Catholics of Coventry as a memorial to the men who have fallen in the war.

The Barry Council have decided to approach the Board of Education for consent to utilise the site purchased for a new school on Western Hill for the purpose of erecting dwelling houses.

Second-Lieutenant Bernard Richard Penderel-Brodhurst, R.E., killed in action, was the only surviving son of Mr. J. Penderel-Brodhurst, editor of "The Guardian." He was articled to Mr. Mervyn Macartney, F.R.I.B.A., architect to St. Paul's Cathedral. He went to France in April last.

Second-Lieutenant Horace Victor Walter Pite, Hampshire Regiment, reported missing last April, is now officially reported killed in action in Palestine. He was the younger son of Mr. and Mrs. William A. Pite, of 13 Elm Grove Road, Ealing, S.W. He was a probationer of the Royal Institute of British Architects.

At an inquest in the City of London held on Monday the jury, returning a verdict of accidental death, added a recommendation that a door to a lift which could be opened by any person, other than the lift attendant, ought not to be permitted. All lifts should be under Government control.

Professor Charles Gourlay delivered an illustrated lecture, entitled "Architectural Gleanings from the English Cathedrals," at a meeting last Friday night of the Architectural Craftsmen's Society held in the Society's room in the Royal Technical College, Glasgow. Mr. David Skinner, president, was in the chair. Professor Gourlay restricted the scope of his lecture to some of the cathedrals he had visited. He compared the design of one cathedral with another, dealing with their situations, external and internal designs, and finally their screens, stalls, wall arcades, and monumental tombs.

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GENERAL.

The Earls Barton Council have approved plans for alterations to the factory of Messrs. Knight, Wagstaff & Co.

The will has just been proved of the late Mr. W. H. Charlton, of Gosforth, Newcastle, at £57,949.

The city housing scheme for Cork is the erection of 2,000 houses.

Mr. J. V. Brennan, M.R.I.A.I., is the architect for the erection of assembly rooms and recreation hall to be erected at Banbridge, Ireland.

Mr. J. J. McDonnell, F.R.I.A.I., of 27 Chichester Street, Belfast, is the architect for the new church to be erected at Glenfarne, Co. Fermanagh, Ireland.

A serious fire broke out on Friday at noon at the leather works of Messrs. Harold Nickols, Ltd., Kirkstall Road, Leeds. The premises were completely destroyed.

Mr. William Hugh Thomson, Secretary of the firm of Morrison & Mason, Ltd., builders and contractors, Glasgow, left estate valued at £16,197.

Boston Town Council have passed plans submitted for conversion of warehouse in Strait Bargate to a sailors' and soldiers' club.

The steelwork for the new generating station for the Bradford Town Council is to be supplied by Messrs. Goodall, Clayton & Co., Ltd.

Mr. W. J. Boot, of Cannon Place, N.W., Vice-President of the Royal Institute of British Artists, 1895-1914, left £5,320.

Messrs. W. Scott, Ltd., have informed the Sedgefield Rural Council that at the termination of the war they will proceed with a scheme for providing workmen's cottages in connection with their Trimdon Grange Collieries.

Professor W. Ernest Dalby, F.R.S., has consented to serve on the expert sub-committee of the Gas Traction Committee in the place of the late Colonel Bertram Hopkinson, F.R.S.

Mr. Geo. F. Beckett, F.R.I.A.I., architect, of 97 Stephen's Green, Dublin, has taken into partnership his assistant, Mr. Cyril Ashlin Harrington, and the practice will in future be carried on as Beckett & Harrington.

The death took place on Friday last of Mr. Horace Cox, at Eastbourne. For fifty years he controlled the business which owned the important journals "The Field," "The Queen," and "The Law Times."

The Tilbury Urban Council have adopted the report of their Housing and Town Planning Committee for the provision of 1,000 houses and that provisional agreements be entered into for the purchase of land required.

The death took place last week of Mr. Benjamin Kelly, of Dunvant Lodge, Orrell Park, and Walton, a member of the firm of Kelly Brothers, builders and contractors, Walton and Liverpool.

The building in Suffolk Street, which has been the home of the Royal Society of British Artists since its foundation in 1823, has been commandeered by the Government, and the Society's autumn exhibition will be held at Burlington House.

It was reported at the last meeting of the Saltash Town Council that an inspector under the Housing and Town Planning Act had approved the tentative proposals of the Council as to site and general arrangements, and had urged the Council to at once submit a scheme to the Local Government Board.

Lieutenant (Acting Major) W. F. Beattie, M.C., R.F.A., who is reported died of wounds, was a son of Mr. Thomas Beattie, sculptor, Haymarket Terrace, Edinburgh. The deceased officer, prior to the war, was also a sculptor. He was educated at George Watson's College and the Edinburgh College of Art.

The firm of Wriford, Dixon & Winder, surveyors, of 11 Serjeants' Inn, E.C., has been dissolved. Mr. Wriford will practice as Messrs. Wriford & Co. at 61 Connaught Street, Hyde Park, W., and Mr. Dixon and Mr. Winder, both of whom are serving, will be in partnership as Dixon & Winder, and pending their return their affairs will be managed by Messrs. Henry Chapman & Co., of 2 Southampton Street, Strand, W.C.

Proposals have been submitted to the General Council of the Anglo-Belgian Union by Monsieur Eugene Standaert, Deputy for Bruges, that the Union might undertake to promote a competition for the design of a monument which it is proposed to erect on the Mole at Zeebrugge as a memorial of the heroic landing of the officers and men of H.M.S. "Vindictive" on April 23, 1918—St. George's Day. The design for this monument will be open to competition by artists and sculptors of Belgian and British nationality. A committee has been formed to carry these proposals into effect. Full details of the competition will be published at a later date. The address of the Anglo-Belgian Union is 6 Burlington Gardens, W. 1.

The death took place on Thursday, October 10, at Hastings, of Mr. Howgrave-Graham in his eightieth year. Mr. Howgrave-Graham was educated privately and at King's College, London, and was articled to Mr. (afterwards Sir) Robert Rawlinson. During the period of the articles, and for some time after, Mr. Howgrave-Graham was resident engineer of Worthing Pier and second engineer of a railway projected in Belgium, which was abandoned in consequence of the Overend & Gurney financial crisis of 1866. For some years after this he was associated with hospital work, serving on a number of committees. For a period of nearly thirty-six years the deceased was secretary of the Institute of Patent Agents.

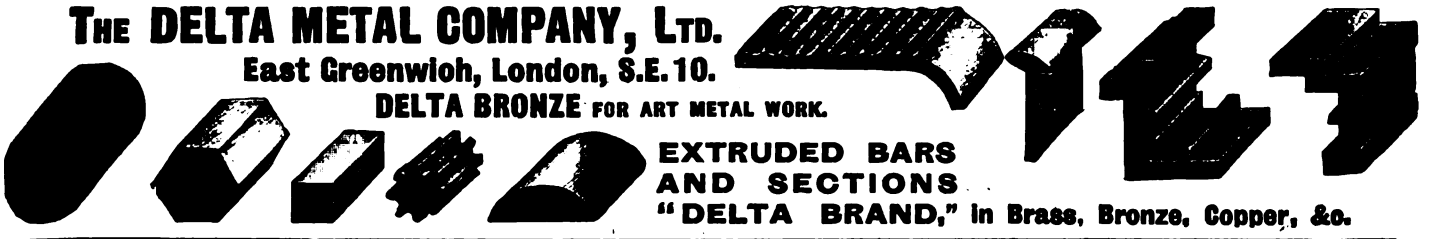
At the seventh annual general meeting of the British Commercial Gas Association, held at the Royal Society of Arts, John Street, Adelphi, W.C. 2, on Wednesday afternoon, October 16, the President, Sir Hallewell Rogers, J.P., in introducing the incoming President, Lord Moulton, P.C., K.C.B., F.R.S., Director-General of Explosives Supplies, said that apart from its prompt action in meeting the need for explosives in the early days of the war and in releasing men for the fighting forces and experts for the laboratories, the gas industry had done invaluable work for the country in the quick improvisation of depôts, canteens, hospitals, and other establishments for the military army, and of factories and workshops for the industrial army. It had set itself to providing fuel oil for the Navy; had furnished the farmer with cheap and indispensable fertilisers; had been an important source of ammonia supply; and, last but not least, had furnished enormous supplies of gaseous fuel to munitions works of all kinds, as well as in increasing quantities to all branches of industry and to the homes of the people.

At the invitation of the Village Centres Council, of 5 Little College Street, Westminster, Mr. John Hodge visited the estate at Enham, near Andover, selected by them as the site for the first village centre for the medical treatment and training of disabled ex-service men. The object of the Council is to establish these centres in various parts of the country for the reception of men recovering from neurasthenia, shell-shock, amputation, or fever. Here, after discharge, their medical treatment will be continued, in conjunction with careful training in occupations selected with a view to individual tastes and capacities, such as agriculture, horticulture, dairy and poultry farming, furniture and boot making, &c. The Enham Estate is admirably suited to its purpose. It contains over 1,000 acres, with varied building accommodation sufficient for 150 men, but when this centre is in full swing the Council hope to have 1,000 men undergoing treatment and training at the same time. Before this can be done, however, £100,000 must be raised by the Council. After carefully studying details of the enterprise and exploring the main building and gardens on the estate, Mr. Hodge said he considered the surrounding ideal for such a scheme as the Village Centres are undertaking.

"The Guardian" says in a note in their last issue: It is a thousand pities that some better method cannot be found for preserving the antiquities of our country than that of railing them in by unsightly barriers, destroying their proportions in relation to the natural surroundings, and effectually killing whatever is picturesque and impressive in them. Nobody, we suppose, can visit Kit's Coty House on the downs above Maidstone without an acute spasm of pity for the ancient cromlech, half-hidden and wholly marred by the dark cage which now shuts it in. Now the question is whether Stonehenge, the finest and most impressive of our neolithic monuments, is to have its life saved upon somewhat similar but equally unpromising terms. Stonehenge owed not a little of its impressiveness to its solitary position on the dark moorland; as a caged monster (with a charge made for admission, "more Britannico") much of its impressiveness has vanished, whatever else may still be preserved. The suggestion that a "huge Gothic cross" should be erected "in solemn propinquity" hardly mends matters—it would be difficult to imagine anything more incongruous alongside a temple that was in use 2,000 years before Christianity was thought of. Can no way be devised of treating such a monument with respectful sympathy at least?

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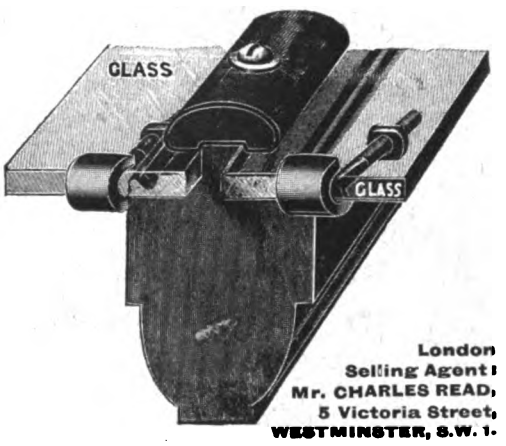
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THE
Architect and Contract Reporter.
FRIDAY, OCTOBER 25, 1918.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

CONTRACTS OPEN.

Bedford.—Nov. 13.—For the erection of buildings and reinforced concrete coal bunkers, for the Corporation. Engineer, Electricity Works, Cauldwell Road. Deposit £1.

Bury (Lancs.)—Oct. 31.—For pulling down and clearing away two shops in Stanley Street, Bury, with all outbuildings, &c. Messrs. D. Makin & Allen, auctioneers, 30 Agur Street, Bury.

Nottingham.—Oct. 28.—For cleaning and painting the military hospital, Bagthorpe, for the Guardians. Mr. Ernest R. Sutton, F.R.I.B.A., Nottingham.

Thornhill (Dumfriesshire).—Nov. 1.—For mason, joiner (including painter and glazier), slater, plaster and plumber works in connection with extensive additions to the Barr Farm, Sanquhar, for which additions Government permission has been obtained. Mr. D. Stitt, Drumlanrig Mains, Thornhill.

TENDERS.

BARNES.

For supply of a rotary converter, &c., for the Barnes Urban District Council.

British Thomson-Houston Co., Ltd., 500-k.v.a. rotary converter, complete with switch-gear and transformers (*provisionally accepted*)	£3,685 0 0

CROYDON.

For supply of water-softening plant, for the Corporation.

W. Boby (*accepted*)	£900 0 0

LOUTH.

For covering in the weighbridge at the borough cattle market.

Broadley (*accepted*)	£27 14 6

SHEFFIELD.

For conversion of premises at Leeder Road, for the Corporation.

G. W. Raynor & Son (*accepted*)	£87 15 0

TIVERTON.

For conversion of two cells at the police station into a kitchen, for the Town Council.

J. Grater & Sons (*accepted*)	£67 10 0

The Driffield Rural Council have sanctioned a scheme for the erection of thirty cottages in the district at the close of the war.

On Tuesday evening at a general meeting of the Royal Society of British Artists Mr. Solomon J. Solomon, R.A., was elected president.

The General Committee of the Blundell's School War Memorial Fund has decided to make an appeal for £20,000 for the purpose of erecting a memorial cross in the grounds and a new school.

The Chorley Board of Guardians have decided to make application to the Local Government Board for sanction to the carrying out of a scheme for the installation of a new heating system, electric-light plant, alterations to the cooking apparatus and laundry plant, and various other improvements at the workhouse at an estimated cost of £5,750.

A stained-glass window, the work of Messrs. Abbott, of Lancaster, in three sections, has been placed in the parish church of St. Andrew, Wigan, to the memory of the late Vicar, now the Vicar of Ampton, near Bury St. Edmunds, who was Vicar for thirty-eight years, and of his son, Lieutenant Bernard W. T. Wickham, South Staff. Regiment, who fell in action at Ypres in April 1917.

Professor F. M. Simpson, F.R.I.B.A., will deliver a public lecture on "The Cathedrals of the Marne-Aisne District—Reims, Soissons, Laon, &c.," illustrated by lantern slides, at University College, on Thursday, October 31, at 5.30 P.M. Cards of admission may be obtained by sending a stamped addressed envelope to the Publications Secretary, University College, London, Gower Street, W.C. 1.

The Institute of Arbitrators held their annual meeting on October 15 at 297 Winchester House, Old Broad Street, E.C., when the retiring president, Mr. Henry Adams, M.Inst.C.E., presented the report of the council and the financial statement, which showed a satisfactory condition. Mr. H. D. Searles-Wood, F.R.I.B.A., was elected as the new president and Mr. E. C. P. Monson, F.R.I.B.A., as vice-president.

The scarcity of dwelling houses in Glasgow and the problems with which local authorities and private building enterprises are faced in providing satisfactory housing accommodation were the outstanding topics dealt with by Mr. Hugh Reid, Dean of Guild, in the annual statement made by him at a sitting of Glasgow Dean of Guild Court. In reviewing the work which came before the Court during the past twelve months Mr. Reid said that in the value of the work authorised the year just closed nearly maintained its own with the previous one, which was an improvement on its predecessor. But these were the lowest since 1889-1890. The last three years, all of which were affected by the Order requiring Government permission, were respectively £435,442, £577,457, and £569,907. The linings in the year under review had fallen to 216, the lowest for over thirty years. There were sixty-four houses of two apartments and twenty-eight of three apartments authorised. No school linings were granted. The bulk of the work authorised was substantially war work. For workshops, &c., there were 119 linings for new work of a value of £466,979, and forty-two linings for alterations and additions of a value of £25,069.

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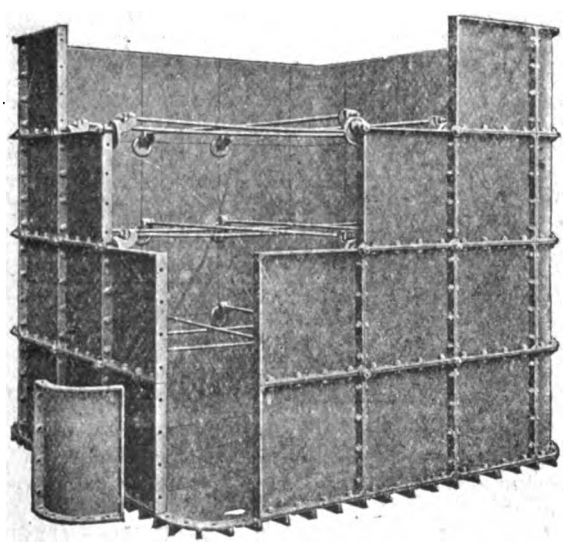
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BUILDING TRADE TRAINING.

CITY GUILDS ACTION.

We give from the "Daily Telegraph" a discussion of a most important conference affecting the Building Trade.

A conference of delegates from the City Livery Companies connected with the building industry was held at Carpenters' Hall on October 21, under the presidency of Lord Burnham, for the purpose of discussing how best they could forward the interests of the trades with which they are connected.

Mr. F. Sutton (chairman of the Trades' Training School) explained that the meeting was one of delegates of the guilds connected with the building trade who desired to do something to improve the conditions of the British working man, to elevate him by educating him in his work and craft. In order better to pursue this desirable object it was important that those Companies who were not rich enough to carry on schools of their own should unite in putting their purses together to help the trade they represented in this direction. The Carpenters' Company had a magnificent training school at 153 Great Titchfield Street, which had been instituted to improve the technique of the pupils—not to supplant their workshop training, but to supplement it. They had six other guilds associated wth them financially in this work, but the Carpenters' Company spent about £2,500, by far the largest contribution.

Major Rigg (Feltmakers' Company) (chairman of the executive of the Reconstruction Committee) said they had been able to group seventy-seven Livery Companies into ten different groups, as follows:—

(1) Building, (2) textile, (3) clothing, (4) metal crafts, (5) military and sporting, (6) victualling, (7) merchant trades and crafts, (8) surgical and military, (9) paper trades, (10) general trades.

He urged that something should be done to develop scientific research in order to increase industrial efficiency and that the apprenticeship system should be revived.

The Rev. Dr. Rosedale (Coachmakers' Company) complained that the majority of workmen were not interested in their work.

Mr. Sheriff Banister Fletcher (director of the Trades Training School) said that what was wanted was one company in each group to be selected to look after that group's affairs, and to have a strong, sympathetic committee. Charity was all very well, but the first duty of a City guild was to look after the trade it represented.

Sir H. Seymour Foster (Glaziers' Company) mentioned that the City guilds now had an exceptional opportunity of doing something to help the industries they were formed to protect, and they had been specially asked by Dr. Addison to revive their work.

Mr. G. M. Burt (Paviors' Company) thought a great deal of help could be rendered by the guilds in connection with the encouragement of apprenticeship and the training of disabled Service men.

Lord Burnham moved a resolution expressing satisfaction at the work already done, extending a cordial invitation to those Companies in the group who had not considered the subject or seen their way to join, in order that they might bring their resources to a common pool for the purpose of technical training and other purposes, and hoping that other groups would attain a like measure of practical effort.

Sir H. S. Foster seconded the resolution, which was carried unanimously.

Mr. Sutton mentioned that they had been trying for twelve months to get disabled Service men to come into their training schools, but without success.

On Saturday morning last a considerable amount of damage was caused to the Mansfield and Sutton-in-Ashfield Co-operative Stores, Stockwell Gate, Mansfield; the building, which was erected in 1908 at a cost of £12,000, is completely destroyed. The fireproof doors prevented the flour mill and warehouse adjoining from being destroyed.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 118,854 (March 9, 1917).—J. R. Little, Morden, Duddington Road, Portobello, Edinburgh.—Sliding doors and partitions.

118,490 (Sept. 29, 1917).—David Smith, 284 South Road, Walkley, Sheffield.—Windows of houses and the like.

118,525 (Nov. 22, 1917).—Harry Pickup, junr., Brook Street, Scarborough.—Barless grate fittings.

118,533 (Dec. 7, 1917).—D. W. Patterson, 200 5th Avenue, New York.—Fire extinguishing systems.

118,534 (Dec. 7, 1917).—C. H. Meigs and F. A. Epps, 200 5th Avenue, New York.—Extinguishing of fires.

118,541 (Dec. 29, 1917).—E. J. Bartells, 204 Northern Life Building, Seattle, King, Washington.—Paving blocks.

118,551 (Jan. 26, 1918).—Luis Wirtz, Richmond House, Poplar Avenue, Edgbaston, Birmingham.—Rolling tapered solid or hollow sections.

118,558 (Feb. 20, 1918).—Samuel May, 275 Old Street, London, E.C. 2.—Portable instantaneous water heaters.

106,621 (May 24, 1917.—Dated under International Convention, May 24, 1916).—F. A. S. Carlisle, 19 Hardy Street, and Benjamin Trathen, 10 Collingwood Street, Nelson, New Zealand.—Heater. This application for a patent has become void, and is therefore open to public use.

112,946 (Jan. 22, 1918.—Dated under International Convention, Jan. 15, 1917).—W. K. Mason, 68 Prospect Street, Cambridge, Middlesex, Mass, U.S.A., and C. L. Donoho, 440 Massachusetts Avenue, Cambridge, U.S.A.—Heaters for radiators.

118,648 (Sept. 21, 1917).—John Hines, 289A Finchley Road, N.W.—Squeegee and like scraping and brushing machines for roads and like surfaces.

118,656 (Aug. 27, 1917).—T. B. Ward, 30 High Street, Aylesbury, Bucks.—Combined stop cock and ball valve for supplying and flushing cisterns with improved valve and adjustable arm to ball valve.

118,768 (Jan. 4, 1918).—R. Y. Ardagh, 68 Denmark Villas, Hove.—Fire-resisting plastic material, its combination with and application to other materials for constructional purposes.

118,776 (Jan. 11, 1918).—W. D. Hazelton, 3 Northlands Street, Coldharbour Lane, S.E. 5.—Roof and wall coverings.

118,784 (Jan. 25, 1918).—G. A. Harry, 2nd Lieut. Labour Corps, 4 Clarence Road, Hackney, N.E.—Air-heating apparatus for use in connection with domestic fire grates.

118,793 (Feb. 25, 1918).—O. J. Oakley, 356 Weston Street, Brunswick, and E. C. Hughes, 44 Miller Street, North Fitzroy, Bourke, Victoria, Australia.—Machine for moulding roofing tiles and the like from clay and like plastic material.

118,803 (Aug. 15, 1917).—R. H. Bicknell, M.I.C.E., 16 Victoria Street, Westminster.—Method of manufacturing pipes and the like.

118,806 (March 20, 1918).—C. A. Forssell, Humlegardsgatan 29, Stockholm, Sweden.—Locking plates for bolt connections.

118,809 (April 4, 1918).—W. L. Walker, 1790 Broadway, New York, U.S.A.—Basement, cellar, and like lights.

118,826 (May 22, 1918).—The Uniform Co., 10 High Street, Boston, Mass., U.S.A.—Apparatus for constructing concrete floors.

118,915 (Oct. 8, 1917).—F. H. Groves, 38 Almington Street, Hornsey Rise, N., and Ronald Adam, 123 Bury New Road, Bolton, Lancs.—Winding gear for lifts and other purposes.

118,905 (Sept. 25, 1917).—R. C. Wheeler, Clifton House, Park Lane, Norwich.—Sash fasteners.

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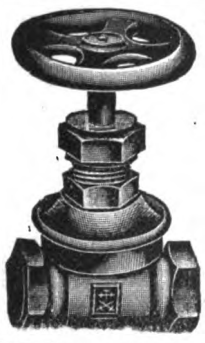
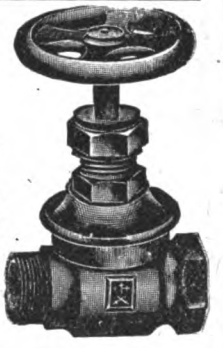
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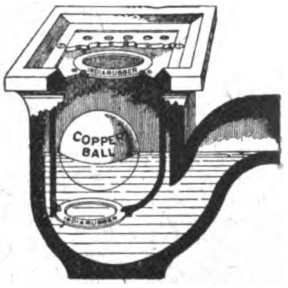
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118,917 (Oct. 9, 1917).—T. H. Webb, 11 St. John's Villas, Wakefield, and Benjamin Wilkinson, 51 Major Street, Thornes, Wakefield.—Device or apparatus for use in connection with domestic firegrates for the purpose of saving coal and for other purposes.

118,950 (Nov. 27, 1917).—W. H. Crosthwaite, Dock Chambers, Middlesbrough.—Manhole covers for tank tops and the like.

118,966 (Dec. 24, 1917).—Ernest Vaughan, Eagle Foundry, Dudley Port, Tipton, Staffs.—Treads or wearing surfaces of floors, pavements, stairs and the like.

118,974 (Jan. 29, 1918).—William Coackley, 8 Broad Street, Pendleton, Manchester.—Fittings for use in glazing roofs and like structures.

118,980 (Feb. 7, 1918).—J. T. McNay, 62 Northumberland Road, Old Trafford, Manchester.—Rolled bars for ferro-concrete construction.

118,995 (March 18, 1918).—C. E. Anable, 206 People's Bank Building, Sacramento, California.—Permutation locks.

119,010 (May 9, 1918).—Thomas Robinson & Son, Ltd., and C. J. Robinson, Railway Works, Rochdale, Lancs.—Cutter blocks for use in machines for planing and moulding wood.

119,044 (Dec. 30, 1916).—F. L. Rings, The White Cottage, Copse Road, Cobham, Surrey.—Girder for reinforced concrete work, and 119,045 (Dec. 30, 1916).—Reinforced blockwork floors, roofs, and the like.

119,056 (Aug. 3, 1917).—H. S. Dodd, 313 Eglinton Avenue, Toronto.—Tubular heaters for air, water, or other fluid.

Any of the above specifications may be obtained from J. D. Roots.

GENERAL.

The new rules of the South Wales Federation of Builders will come into force on November 1.

The Portadown Urban Council (Ireland) have passed plans for the erection of a factory at Tavanagh.

The late Mr. John Alfred Hunt, builder and contractor, of Hoddesden, Herts., left £20,038.

Mr. D. Mackinson Fox, M.I.C.E., director of the Brown Bayley Steel Works, Ltd., Sheffield, left estate valued at £107,376.

The Mexborough Urban Council have informed the Local Government Board that they are negotiating for sufficient land for the provision of 200 workmen's houses.

The plans submitted by Messrs. J. & F. Pool to the Phillack Urban Council for additions to their factory have been passed.

A site has been purchased at Willowfield, Belfast, for the purpose of erecting a new R.C. church to be called St. Anthony's.

The death is announced at the early age of thirty-four of Mr. H. W. Wilson, surveyor to the Nuneaton Rural and Bulkington Urban Councils.

The surveyor to the Ossett Town Council has received instructions to prepare plans and estimate for the erection of a building to be used as a national kitchen at the rear of the Town Hall.

A representative committee has been formed with Provost Mangall as chairman at Crieff to make arrangements for the erection of a memorial to those who have fallen in the war.

The Belleek Feldspar Mining Company has commenced operations at Larkhill, Castlecaldwell, co. Fermanagh. Two shafts have been sunk and machines erected. Potash will be produced from the feldspar mineral.

The Southend-on-Sea Council are considering the purchase of the Belfairs Estate; one of the proposals is for a municipal golf links. There are on the estate excellent building frontages to the Eastwood Boulevards.

Many workmen are engaged in making the alterations required by the military at the workhouses which have been taken over in Claremorris, Ballinrobe, Boyle, Strabane, Newcastle West, Athlone, Mullingar, and other places.

Sir Alfred Mond states that there is no intention to commandeer the Adelphi Estate for the purpose of office accommodation for the Air Board. Certain premises have been taken for offices urgently required, but the property contains very little work of the Adams Brothers, and it will be adequately protected.

Capt. R. B. Broster, West Riding Regiment, youngest son of Mr. Robert Buck Broster, surveyor, Ferncliffe Drive, Utley, Keighley, reported as missing, is now notified as killed. He enlisted in September, 1914, and in August, 1916, on qualifying he was granted a commission.

Considerable time has been taken up at the last two meetings of the Liverpool Consistory Court hearing applications for permission to erect brass or marble tablets in churches in the various parts of diocese in memory of those who have fallen in connection with the war.

Mr. H. Ibbotson, builder and contractor, of Weir Street, Wilpshire, Lancs., has received news of the death of his second son through wounds received in action on the Salonica front. Previous to joining up Corporal Edwin Ibbotson was engaged in business with his father.

Sir William Cain, chairman of the firm of Robert Cain & Sons, Ltd., brewers, Liverpool, of Wargrave Manor, Berks., has made a munificent gift to the nation of his mansion, Wilton Grange, West Kirby, Liverpool, which is to be used as a convalescent hospital for wounded officers of His Majesty's Forces. Sir William has also given a sum of £2,000 for the cost of the necessary alterations.

A Commissioner from the Local Government Board attended at Jarrow Town Hall on Thursday, the 17th inst., and conferred with members of the Corporation on the housing requirements of the borough. In a statement submitted to the L.G.B. it is pointed out that the population was 39,460, an increase of 2,500 since the outbreak of war; the houses numbered 7,061. Since 1911, 90 houses had been erected, and it is estimated that 1,200 houses are required, of which the Corporation recommend 600 to be provided at once. Reference was made to the difficulty of securing sites in the borough.

The London County Council have agreed after some discussion with the recommendation of the Improvements Committee to withdraw the sites of certain houses in Smith Street and North Street from the list of sites available for letting on the Westminster improvement area. The houses, with others the leases of which will not fall in until 1929, were built in the early part of the eighteenth century, and a memorial had been presented urging that the demolition of "this old-world quarter" would cause an irreparable loss to the City of Westminster. The retention of the houses had also been urged by the London Society and the Society for the Protection of Ancient Monuments. The suggestion was made in the report of the Committee that in 1929 the whole subject could be reviewed.

The "Daily News," in an article on "Changing London," states: Soho, where dukes lived a hundred years ago, and then went down badly, has been for some years past improving again on account of its commercial value. Savile Row, once filled with the town mansions of the aristocracy, has passed into the hands of some of the best firms of tailors. Hanover Square and George Street have also been transformed into business thoroughfares. Russell Square is another example of a distinguished residential quarter which has now scarcely a single residence left in it. The great houses of Victorian London are, in fact, no longer in demand. After the war the large houses that still remain in Maida Vale, Cricklewood, Brondesbury, Clapham Common, and a dozen other neighbourhoods that could be mentioned, are likely to be converted into flats.

TRADE NOTES.

The Greek commercial delegates who have recently visited this country to visit its important manufacturing centres under the auspices of the Federation of British Industries, inspected the Carron Company's works on October 9. The Carron Company may well be proud of the record of their firm, whose history goes back to 1759, when the company was founded by Dr. Roebuck, who was born in Sheffield in 1716. Ironmaking was begun in the following year, and in 1773 George III. granted the company a Royal Charter. In 1789 William Symington's steamboat was built and launched on the Carron, the engines being constructed at the works, and Major Shrapnel also experimented with the shells that bear his name there. In 1821 the Emperor Nicholas of Russia visited the works, and King Edward (then Prince of Wales) also went over them in 1859. In 1901 a new engineering department was built, and in 1910 the company incorporated the old-established business of Messrs. Longden & Co., of Sheffield, and opened branch works there, while in 1913 the company were appointed iron-founders to the King. The Carron Company's name is synonymous with good work, and both its earlier and later castings represent the high-water mark in execution, and both in its practical and more decorative work the firm always maintains the position its merits have earned.

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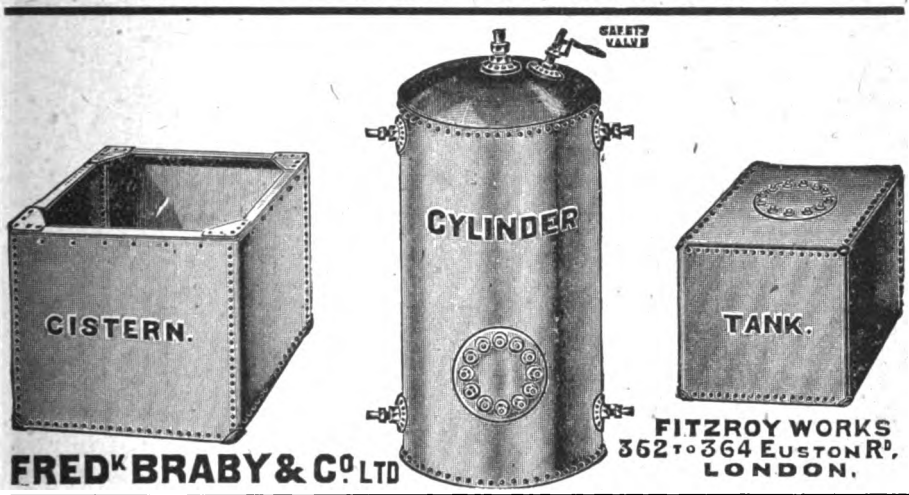
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TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

CONTRACTS OPEN.

BEDFORD.—Nov. 13.—For the erection of buildings and reinforced concrete coal bunkers, for the Corporation. Engineer, Electricity Works, Cauldwell Road. Deposit £1.

BENTLEY (DONCASTER).—Nov. 6.—For erecting a national kitchen in the area of Bentley-with-Arksey, for the Bentley-with-Arksey National Kitchens Committee. Deposit £1. Mr. R. G. Whitley, A.M.I.C.E., Council Offices, Bentley, Doncaster.

EASINGTON COLLIERY (DURHAM). — Nov. 6. — For the painting, repairing and decorating of their board room at Easington, Easington Colliery, for the Guardians of Easington Union. Chairman of the Board, Easington, Easington Colliery.

KIRKCALDY.—Nov. 4.—For brickwork, joiner and plumber work required to be executed at 32 to 50 Links Street, for the Town Council. Mr. W. L. Macindoe, town clerk, Kirkcaldy.

NEWTOWN (MONTGOMERY).—Nov. 22.—For supply of shelving for 6,000 books, for the Montgomeryshire Village Circulating Library. Mr. L. Phillips, clerk to the Education Committee, County Offices, Newtown.

UXBRIDGE.—Nov. 5.—For alterations and additions to 61 High Street, Uxbridge, in connection with adapting the premises for a National kitchen, for the Uxbridge Urban District Council. Mr. W. T. Harvey, clerk, 63 High Street, Uxbridge.

TENDERS.

LONDON.

For proposed self-contained national kitchen at 48 and 50 Upper Kennington Lane, for the Lambeth Borough Council.

Builder Work.

J. PARSONS, 190-192 Waterloo Road, S.E. 1 (*accepted*) £237 0 0

Equipment.

FALKIRK IRON CO., LTD., Craven House, Kingsway, W.C. 2 (*accepted*) . . £418 5 0

For supply of furnace castings, for the Hammersmith Borough Council.

CADOGAN IRONWORKS (*recommended*) . . £22 6 0

For supply of a vacuum motor gully cleansing machine, for the Lambeth Borough Council.

STRAKER-SQUIRE, LTD. (*recommended*) . £1,100 0 0

For painting work at the Durning Library, for the Lambeth Borough Council.

J. V. WATKINS, 2 Harpenden Road, West Norwood (*recommended*) £34 16 6

For painting the second-class swimming bath, for the Hammersmith Borough Council.

G. W. CLARKE, 1 and 3 Uxbridge Road (*Recommended*) £207 10 0

For supply of 540 lap-welded tubes for retubing the air heaters of the Davey-Paxman boilers, for the Hammersmith Borough Council.

J. WILSON (LONDON), LTD. (*recommended*) . £216 15 0

For supply of cable, for the Hammersmith Borough Council.

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IN his presidential address to the Institution of Engineers and Shipbuilders in Scotland, at the Technical College, Glasgow, Mr. Alex. Cleghorn said increased production in practically every industry was possible if scientific methods were applied, and if inefficiency were replaced by efficiency. If, in anticipation of a return to peace, our industries so remodelled themselves that the maximum output which industry, good management, time, and improved machinery could attain was realised, it would be possible to pay wages far in excess of any paid before the war, and still produce at lower prices than ever before.

THE Lord Mayor of Manchester read a letter received by him from Sir Thomas Beecham to the City Council at Wednesday's meeting. Sir Thomas offers to build an opera house "that shall be of size and importance not less than those of any other opera house in London or any Continental towns with the exception of Paris and Petrograd. The work should be started so soon as labour conditions and the cost of materials made it possible. For a period of ten years after it was built he would maintain and manage it, and then hand it over as a present to the city." A condition was that the Corporation would provide a site of not less a size than 45,000 square feet. The hearty thanks of the Council are to be conveyed to Sir Thomas, and a special committee will be elected to consider the offer.

THE report issued by the Housing of the Working Classes Committee of the London County Council states that in regard to unsuitable accommodation it is estimated that in areas of an insanitary character, about 184,000 persons are affected. As regards unhealthy houses no precise particulars can be given, but there is no doubt that while many such houses would be only fit for demolition, many others although at present unsuitable for occupation could be renovated and made habitable, at any rate for a limited period, by putting into operation the powers contained in the Housing, Town Planning, &c., Act, 1909, by which the local authority may compel the landlord to make the houses in all respects reasonably fit for human habitation. The general result of a consideration of the foregoing facts and figures is that housing conditions are, and at the termination of the war are likely to be, unsatisfactory to a considerable extent, and that ameliorative measures will be necessary on a larger scale and at a more rapid rate than has hitherto been possible.

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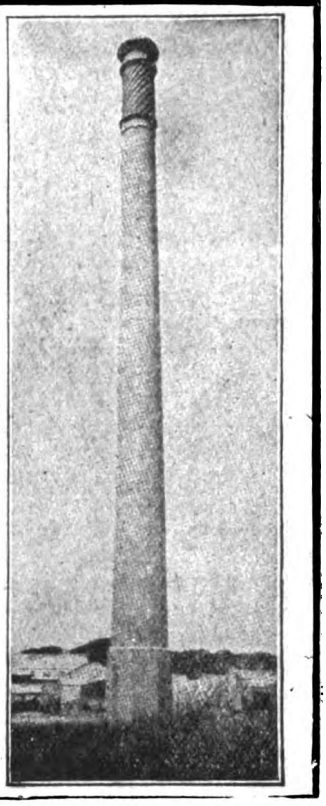
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SCOTTISH ARCHITECTS AND SUPPLY OF MATERIALS IN AFTER-WAR BUILDING.

According to a report in one of the leading Scottish papers, the Institute of Scottish Architects were recently invited to give evidence at Edinburgh before the chairman of the Building Materials Supply Committee under the Ministry of Reconstruction. This Committee has been instructed to inquire into the question of the supply of building materials after the war and what control, if any, should be exercised over building operations. Mr. William Kelly, A.R.S.A., Aberdeen, president of the Institute, and Mr. T. F. Maclennan, Edinburgh, and Mr. J. M. Dick Peddie, Edinburgh, gave evidence on behalf of the Institute. The points of their statement are as follows:—

There can be little doubt that the supply of materials, and possibly of labour, during the "transition period" will fall short of the requirements. In these circumstances in the national interest priority will have to be accorded for a time to constructional work and building operations of certain kinds. Among these are shipbuilding, the extension or erection of factories, necessary to enable the country to become self-supporting or at least less dependent on foreign supplies, and the building of the large number of houses required for the housing of the working classes and those engaged in production. Preference may be necessary for a time for the extension or erection of schools and other educational institutions, and for public buildings essential for the general welfare of the community. Priority having been extended for the purposes generally indicated above, all further claims should be dealt with alike, but claims for expenditure on war memorials (even to those not of direct utility) should receive special consideration.

To enable claims for priority to be dealt with it is obvious that Government control is essential, but we urge respectfully and strongly (1) that such control should come to an end as soon as that is possible; and (2) that the control should be decentralised, and that for Scotland there should be a department armed with wide powers and responsibility, subject only to the guidance of the Central Authority.

As regards the steps necessary to provide for increased production of the necessary building materials, as soon as it is possible to release men from military service, those who were formerly engaged in the production of building materials should be returned to civil life, and it is even of greater importance that those who were employers, or were engaged in the control of those engaged in production, should be released in time to organise the resumption of production.

As a great deal of the wood required for building purposes must continue to be imported, some proportion of the shipping available after the war should be set aside for wood carrying.

If building is to be resumed immediately after the termination of hostilities, the necessary plans and other arrangements for building must be in readiness beforehand. To that end architects, draughtsmen, and surveyors should be among the first to be returned to civil life when military requirements permit.

We have difficulty in suggesting any method of control which could effect a reduction in the cost of building materials, and believe that increased production will automatically and alone tend to reduce unduly high prices. On the other hand, we think that considerable reduction of prices would follow on better methods of distribution were inland carriage improved and rates reduced.

The present excessively high cost of building is due not only to the high prices of materials, but to the unduly high rates of wages. The increase in the cost of living and the smaller purchasing power of money together, warranted large advances on pre-war rates; but the standard has risen out of proportion to these causes. This is due, in great measure, to the conditions under which necessary war work has been carried out under Government control; and when work comes to be done under natural conditions, and without Government control, the rates of wages will return to their true economic level.

We repeat that it is in the interests of the country that Government control of materials and labour should cease at the earliest moment after the national interests no longer demand such support. The cost of building will continue to be artificially higher than it should be as long as there is interference with the free distribution of building materials, and with the conditions of employment.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

119,067 (Sept. 14, 1917).—J. B. Morgan, 13 Market Place, Nuneaton, Warwick.—Domestic and other fire-grates.

119,087 (Sept. 20, 1917).—W. H. Kenyon, 30 Deardengate, Haslingden, and William Smith, 67 Aitken Street, Accrington.—Stepped brick for the walls of buildings and acid plants.

119,099 (Sept. 26, 1917).—A. W. Brown, Stirling District Asylum, Larbert, Stirlingshire.—Electrical system for indicating an alarm of fire or such like simultaneously at any required number of points or stations.

119,111 (Oct. 5, 1917).—Harald Kaas, Haegdehaugsveien 31, Kristiania, Norway, Architect.—Plants for assorting wooden materials and the like according to their size.

119,138 (Nov. 5, 1917).—J. E. S. Dakers, Fulford, Tredegar, Monmouth.—Combined joining and sawing machine.

119,148 (Nov. 20, 1917).— F. W. Campbell, 6 Upper Queen Street, Belfast.—Concrete piles.

119,152 (Dec. 1, 1917).—A. T. O. Quick, Capt. R.E. (T.), 60th Artisan Works Company, A.P.O. S21, B.E.F.—Composition and manufacture of bricks, slabs, columns and the like, and structures erected therewith.

119,206 (May 15, 1918).—C. J. Mannell, Petra Villa, Poole Hill, Bournemouth, and Robert Ross, 79 Holdenhurst Road, Bournemouth.—Machinery employed in the manufacture of concrete and the like wall blocks.

No. 113,785 (Feb. 19, 1918—Dated under International Convention Feb. 24, 1917).—N. S. Borch, 6 Ribegade, Copenhagen. Process of manufacturing Portland cement of raw materials with hydraulic properties.

118,116 (Aug. 6, 1918—Dated under International Convention Aug. 6, 1917).—Soc. Anon. des Produits Refractaires de l'Ouest, 37 rue de Stresnes, Paris. Manufacture of silica bricks.

119,268 (Sept. 21, 1917).—William Brown, 27 Buxton Road, Heaviley, Stockport. Road-sweeping machines.

119,270 (Sept. 21, 1917).—The Benjamin Electric Ltd., 1A Rosebery Avenue, E.C., and Edward Fowler, 15 Diamond Road, Slough. Security or locking devices for electric incandescent lamps.

119,305 (Oct. 16, 1917).—Nederlandsch Indische Maatschappij tot Voortzetting der Zaken van der Linde and Teves en R. S. Stokvis en Zonen Ltd., Amsterdam, Holland. Apparatus for keeping self-closing fire doors, lift doors, hatchway covers and the like in open position.

119,326 (Nov. 6, 1917). T. G. Stewart Rogers, 5 Great Winchester Street, E.C. 2. Domestic fireplace for distributing heat and economising fuel.

119,331 (Nov. 13, 1917).—Stewart Kaye, R.E., 12 Dean Terrace, Edinburgh. Machines for erecting walls of bricks and the like.

119,347 (Dec. 10, 1917).—E. A. Reed, St. Mary's, Manor Road, Goring, Oxon, and L. S. Burt, of Salisbury House, London Wall, E.C. 2. Construction of portable or temporary buildings.

119,381 (Jan. 29, 1918).—William Coackley, 8 Broad Street, Pendleton, Manchester. Bars or the like for supporting the glazing of roof and like structures.

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119,396 (March 4, 1918).—J. E. Criggal, 28 Queen's Road, Coventry. Wood planing and like tools.

119,397 (March 12, 1918), J. E. Davis, Ironton, Lawrence County, Ohio, U.S.A. Gas-heating stoves.

119,406 (March 23, 1918).—Charles Price, and F. C. Price, Broadheath, Chester. Road scarifiers.

119,417 (May 3, 1918).—The Davis Gas Stove Company Ltd., and J. H. Barralet, Geyser Dept., The Diamond Foundry, Luton Water-heaters or geysers.

Any of the above specifications may be obtained from J. D. Roots.

GENERAL.

LADY BUTLER on Monday last unveiled a window which has been subscribed for by the choristers of Hereford Cathedral to the memory of the late Dr. G. R. Sinclair, Cathedral organist.

THE Rochdale General Purposes Committee and Health Committee have completed arrangements for the purchase of land at Pitts and Longfield Farm for the erection of workmen's houses.

MR. WILL THORNE, M.P., and Mr. W. H. Hutchinson, vice-president of the Labour Party, have been elected to the Council of the Boys' Welfare Association of 33 Tothill Street, Westminster.

THE first meeting of the session of the Royal Institute of British Architects will be held on Monday, November 4, at 5 P.M., when the president, Mr. Henry T. Hare, will deliver the opening address.

OFFICIAL news has been received of the death of Second-Lieutenant Alfred Tinniswood, R.E. He was a Licentiate of the R.I.B.A., and prior to joining up was in the architect's department of the L.C.C.

THE memorial by Old Rugbeians executed by Sir Thomas Brock of the Very Rev. T. W. Jex-Blake, D.D., will be unveiled in Rugby School Chapel by Sir Charles Sargent on Saturday, November 2, at 3.45 P.M.

IT is proposed by the Bishop of Southwell that the Notts and Derby War Memorial should take the form of the erection of a new church in Nottingham and the enrichment of the cathedral church designate of Derby.

HEMSWORTH Rural Council are negotiating for land for housing purposes at Ackworth, Brierley, Grimthorpe, Havercroft, Hemsworth, Great Houghton, Ryhill, Shafton, South Elmsall, South Hindley, and South Kirkby.

MR. WILLIAM LIVERSIDGE, of Millgate House, Selby, who is in his ninety-second year, is seriously ill with pneumonia. Mr. Liversidge rebuilt the south transept to Selby Abbey, destroyed in 1690 by the fall of the central tower.

THE death has taken place at Cardiff of Mr. G. L. Hindmarsh, Lloyds' chief engineer surveyor of that port; in his sixty-seventh year, his son, Mr. James Hindmarsh, is head of the firm of Hindmarsh & Walker, consulting engineers, Cardiff.

THE Halifax Corporation have purchased premises occupied by the Union of London and Smith's Bank with a view to their adaptation as offices for the borough engineer and his staff. The necessary alterations are to be carried out at a cost not exceeding £750.

THE Manchester Food Control Committee propose to provide more municipal food kitchens, and the City Council is to be recommended to approve a scheme for the provision of a kitchen at the Bradford Baths at an estimated cost of £2,180, and the adaptation of the girls' institute, Mill Street, Ancoats, for a similar purpose, at a cost of £585.

THE Housing Committee of Gourock Town Council, subject to the approval of the Local Government Board, has recommended that a feu-duty of £16 per acre be offered for the old public park and adjoining ground on the south side of Broomberry Drive. A building scheme will provide for the erection of about sixty houses for the working classes, to be proceeded with after the war.

AT the dedication at Eton College on Saturday of a stall plate in the up chapel to the memory of the late Sir Cecil Spring Rice, late British Ambassador at Washington, a letter was read from Mr. J. P. Morgan to Lady Spring Rice intimating that a large number of American friends of Sir Cecil had collected a fund, the income from which was to be paid to Lady Spring Rice during her life and to the two children until they were thirty-six, the fund to be eventually transferred to Balliol College, Oxford, as the Cecil Spring Rice Memorial Fund, the income to be used for travelling scholarships for young men entering the diplomatic service to enable them to acquire the necessary proficiency in foreign languages.

MR. C. W. PURCHON, A.R.I.B.A., in the course of a lecture on the Housing Problem in Sheffield given on Monday evening at the Sheffield Y.M.C.A., stated that the housing problem is at the root of most of the social problems, particularly in Sheffield, is generally admitted. In this city there are 16,000 back-to-back houses out of a total of 107,000 houses, and there are 8,000 which the authorities have agreed to describe as being more or less insanitary and unsuitable for their purpose. Every house should have a well-ventilated larder. Those who lived in larderless houses became "C 3" people because they lived in "C 3" houses. Every house should have a bath. We had progressed in armaments, so why could we not progress in the decencies of life? To accommodate the normal increase of population they required 1,000 new houses per annum, so during the next twenty years it was a scientific fact that they would have to build about 50,000 houses.

FOR next year's British Industries Fair the Board of Trade have again been able to secure from the Port of London Authority the great warehouses in Pennington Street which proved so highly satisfactory for the Fair held at the beginning of this year. The fair will open as usual on the last Monday in February (February 24) and will remain open until Friday, March 7. In order in no way to interfere with the production of munitions, the fair will again be restricted to the same trades which have participated in the last three fairs—namely: glass and pottery; paper, printing and stationery; fancy goods; and toys. As in past years, the invitations to visitors to the fair will be issued by the Board of Trade, and admittance will be restricted to bona fide buyers interested in the above trades. Over 2,000 forms of application for space have already been issued to manufacturers in the trades concerned, and it is expected that the number of firms anxious to participate will be considerably in advance of last year, when orders to the value of over a million and a half were placed. Eligible manufacturers who have not received application forms should, if they wish to participate, communicate at once with the Director, British Industries Fair, Board of Trade, 10 Basinghall Street, London, E.C. 2.

TRADE NOTES.

ONE of the most remarkable of modern inventions which is bound to be of very great use in the world of peace, as it has already been in that of war, is what is known as Triplex glass made by the Triplex Safety Glass Co., Ltd., whose works are at Willesden and whose offices are 1 Albemarle Street, Piccadilly, W. Reduced to its simplest form, triplex glass consists of two pieces of glass between which is introduced a sheet of transparent xylonite. The three layers are joined together under very high pressure with a transparent cement, the result being a substance which is indistinguishable from ordinary plate glass. It will crack or shatter under a sufficiently strong blow, but does not, like glass, break to pieces. Goggles made of it become starred without breaking, thus saving the eyes. One $\frac{3}{8}$-in. Triplex affords adequate protection against shrapnel bullets, while the thicker qualities, especially the 8-ply, will stand a direct hit from a rifle bullet fired at short range, and there are almost no limits to its useful application. Outside some large insurance offices recently erected in Leadenhall Street it was used in place of an area wall or iron railing, thus affording ample protection without darkening the basement windows. In shipbuilding also it will be found invaluable. We have little doubt that it will come in for extensive use in building directly the war is over. Its uses so far have been chiefly in connection with aeroplanes, ships, locomotives, and submarines. Other purposes for which it will be certain to be in extensive demand will be for the showcases in museums, for glazing pictures, shop and other windows, lunatic asylums, and other places subject to rough usage.

GREAT developments may be looked for in the immediate future by Messrs. Baldwins, Ltd., in the Jersey Marine, Swansea Docks, and Briton Ferry areas. As already announced, this firm recently acquired the Briton Ferry Ironworks at a cost of £190,000. During the last few days they have conducted boring operations for a proposed new colliery between the Danygraig Station of the Rhondda and Swansea Bay Railway and Llansamlet. These operations have proved successful, and a new pit will be sunk in this neighbourhood. Messrs. Baldwins, Ltd., have acquired a lease of 3,000 acres of land from Lord Jersey for this purpose, and also for erecting new works in the district. A "sintering" works will be constructed almost immediately on the Swansea Burrows side. This is an entirely new industry in this country, having formerly been in the hands of the Germans exclusively. Land has also been secured for the erection of workmen's houses at Jersey Marine and Llansamlet. In this important development scheme the golf links of Jersey Marine will in all probability be taken over.

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THE

Architect and Contract Reporter.

FRIDAY, NOVEMBER 8, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

COMPETITIONS OPEN.

PONTYPOOL.—Nov. 12.—Designs, plans, and quantities for 200 to 300 houses for their area, for the Urban District Council. Mr. H. H. Haden, clerk to the Council, Pontypool.

CONTRACTS OPEN.

BARNSLEY.—For carpenter and joiners', slaters', plumbers', ironfounders', and painters' work in enlargement of Dearne paper works, Barnsley, for Messrs. Charles Marsden & Sons, Ltd. Mr E. W. Dyson, architect, 10 Regent Street, Barnsley. Deposit £1 1s.

BARTON-ON-HUMBER.—For brickwork, joinery and glazier work of proposed sheds at their works at Barton-on-Humber, for the Farmers' Co., Ltd.

BEDFORD.—Nov. 13.—For the erection of buildings and reinforced concrete coal bunkers, for the Corporation. Engineer, Electricity Works, Cauldwell Road Deposit £1.

BRISTOL.—Nov. 22.—For reconstruction of single-floor transit shed, known as shed "A," Avonmouth Docks, for the Docks Committee. Mr. T. A. Peace, engineer, Dock Engineer's Office, Bristol. Deposit £5. Secretary of the Docks Committee, Docks Office, Bristol.

DEWSBURY.—Nov. 11.—For construction of wooden polling screens, for the Corporate Property Committee. Mr. J. Hall, town clerk, Dewsbury.

KELLS.—Nov. 20.—For taking down, removing, and re-erecting at Kells the mission chapel at Blackbeck. Also for fencing site at Kells. Rev. E. Campbell, 3 Cross Street, Whitehaven.

NEWTOWN (MONTGOMERY).—Nov. 22.—For supply of shelving for 6,000 books, for the Montgomeryshire Village Circulating Library. Mr. L. Phillips, clerk to Education Committee, Newtown.

STOCKTON-ON-TEES.—Nov. 12.—For additions and alterations to 3 The Square (bricklayer, joiner, slater, and plumber's work), for the Corporation. Mr. T. Downey, town clerk, Stockton-on-Tees.

TENDERS.

LEEK.

For supply of 310-h.p. horizontal gas engine for generating plant at the electricity works, for the Urban District Council.

NATIONAL GAS ENGINE CO. (*accepted*) . £3,300 0 0

LONDON.

For adaptation of practical workrooms for evening institute at the Woolmore Street school, Poplar, for the London County Council.

A. E. SYMES (*recommended*) . . . £317 0 0

For covering drums with copper wire gauze, in lieu of worn-out coir matting, and fitting new piping, water-spraying nozzles, &c., in connection with the Plenum system of heating and ventilation at South Hackney central school, Cassland Road, Hackney, for the London County Council.

COMYN, CHING & CO., LTD. (*recommended*) . £244 0 0

For installation of a low-pressure hot-water system in the two temporary iron buildings on the Haverstock Hill site, for the London County Council.

R. H. & J. PEARSON, LTD. (*recommended*) . £198 0 0

NEWMARKET.

For construction of buttresses to the tipping platform at the outfall works, for the Urban District Council.

LINZELL & EDMONDSON (*accepted*) . . £72 15 0

MR. FRED J. WINKLEY gave a lecture on Monday afternoon in the hall of the Society of Arts on "Old Southwark."

THE Docks Committee of the Aberdeen Harbour Board suggest that the memorial to be erected to the memory of Footdee men who have fallen in the war should be erected at the south end of the new Pier Road.

SERGEANT JOHN JAMES JONES, M.G.C., has been awarded the D.C.M. and the Military Medal for gallantry on the field. Prior to joining up he was associated with his brother in the business of builders at Tonypandy.

MR. GEORGE PATERSON, builder, Pitmedden, Udny, N.B., has received news of the death at the Front of his son, Lance-Corporal George Paterson, who prior to the war was associated with him in the business.

MR. REGINALD B. LODER, J.P., speaking at the quarterly meeting of the Governors of Northampton General Hospital, foreshadowed heavy expenditure directly they were permitted to incur it. A system of central heating would have to be introduced, the approximate cost of which would be £10,000. A further sum of over £1,500 would have to be spent on painting, and it was hoped to obtain permission for the erection of their pathological laboratory so urgently required.

THE report of the directors of Messrs. Joseph Owen & Sons, Ltd., timber merchants, of Liverpool, shows a record year's trading. After payment of debenture interest and providing for depreciation an amount of £72,170 17*s.* is left to be dealt with; £3,000 was placed to reserve for redemption of debentures, reducing them from £40,000 to £18,205. A dividend on the preference shares of 7½ per cent. and 23 per cent. on the ordinary shares, against 6½ and 16 per cent. respectively for last year.

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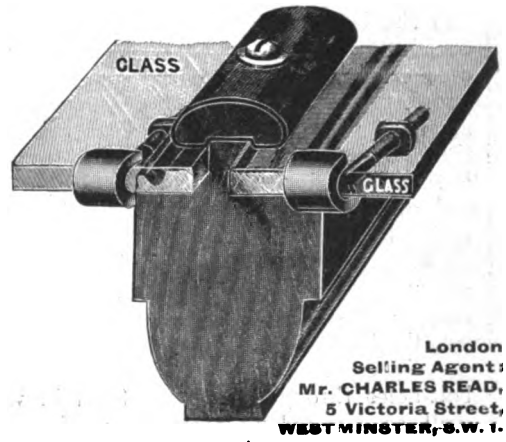
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BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 119,572 (Nov. 27, 1917).—Construction of Walls, Partitions, and the like. Bell's United Asbestos Co., Ltd., 59½ Southwark Street, London. Evelyn Hurden, The Gables, Harefield, near Uxbridge, and J. A. Cann, Old Orchard, Harefield. This invention relates to an improved method of constructing walls, partitions, panels, and the like, in an expeditious and economical manner; the structure, when finished, consisting of reinforced concrete posts with intervening panels formed of concrete cores faced with asbestos cement sheets. The improved system of construction is particularly, but not exclusively, applicable in the expeditious erection of ground floor buildings, suitable for use as workshops and the like. Fig. 1 is a side elevation and fig. 2 a longitudinal transverse section of a wall so constructed. At suitable intervals are erected reinforced concrete posts *a*, having on each side,

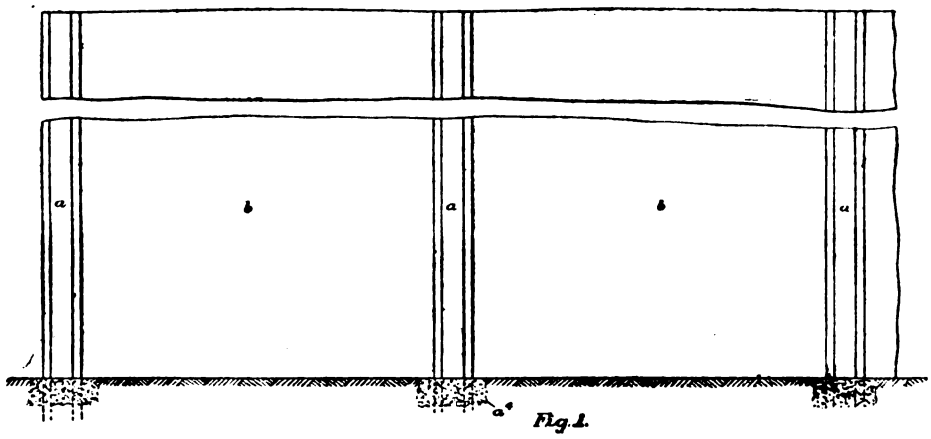


Fig. 1.

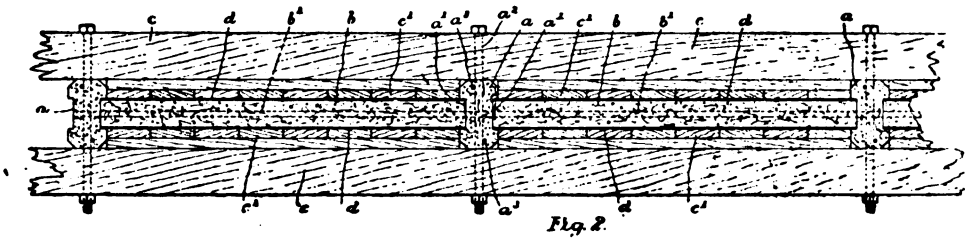


Fig. 2.

in the direction of the wall, a vertical channel a^1 of a width corresponding with the thickness of the wall or panel *b*, which is subsequently constructed to occupy the intervening space between each post and that next in line. In constructing the posts, transverse holes are cored for the admission of bolts a^2 for use in securing the timber *c* employed in supporting the material during the construction of the panels. Vertical bars a^3 are also embedded in the posts and extend downwards into the footings a^4. Longitudinal rods b^1 may also be embedded in the panels *b* and extend through the posts *a* to serve as ties between the former and the latter. The reinforced concrete posts having become firmly set, and a timber shutter c^1 having been erected on either side of the space to be occupied by a panel, two asbestos cement sheets *d* are introduced and arranged with their smooth sides outwards against the timber shutter c^1 on either side. The intervening space is then filled in with concrete and lightly rammed. In order to facilitate the introduction of the concrete constituting the core of the panel, the longitudinal rods or tie-bars b^1, if employed, are only introduced as the concrete filling reaches the level thereof. The panel having been completed to the required height and the concrete having set, the timber supports are removed, the bolts a^2, temporarily employed for securing same, withdrawn, and the bolt-holes through the posts filled in with cement. A wall constructed in the manner described presents a smooth face on either side, and in comparison with a brick wall, requires neither pointing externally nor plastering internally. The lateral grooves or channels a^1 in the posts may, moreover, be utilised for the reception of door or window frames in place of the wall-panels hereinbefore described.—Oct. 16, 1918.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 114,840 (April 4, 1918, dated under International Convention April 13, 1917).—C. S. Fils, Porto Street, Martin, Lausanne, Switzerland.—Boilers for hot-water heating systems.

119,484 (June 29, 1917).—E. O. Brown, The Homestead, Broadstone, Dorset, architect.—Manufacture of coverings for roofs, walls, partitions, and the like.

119,525 (Oct. 3, 1917).—F. T. Walker, Meersbrook Bank, Sheffield.—Method of reinforcing timber.

119,572 (Nov. 27, 1917).—Bell's United Asbestos Co., Ltd., 59½ Southwark Street, Evelyn Hurden, The Gables, Harefield, near Uxbridge, and J. A. Cann, Old Orchard, Harefield.—Construction of walls, partitions, and the like.

119,582 (Dec. 13, 1917).—Andrew Miller, A.M.I.C.E., 80 Dewar Street, Dunfermline, Scotland.—Expanded metal (used in ferro-concrete structures).

119,593 (Jan. 10, 1918).—W. J. Calder, M.D., 9 Leven Terrace, Edinburgh.—Chimney cowl or top.

119,604 (Feb. 14, 1918).—Chas. Wray, F.R.C.S. Eng., Bank Chambers, North End, Croydon.—Gas fires, electric radiators and the like.

119,614 (March 13, 1918).—W. N. Haden & C. I. Haden, St. George's Works, Trowbridge, Wiltshire.—Cooling and heating of buildings.

Any of the above specifications may be obtained from J. D. Roots.

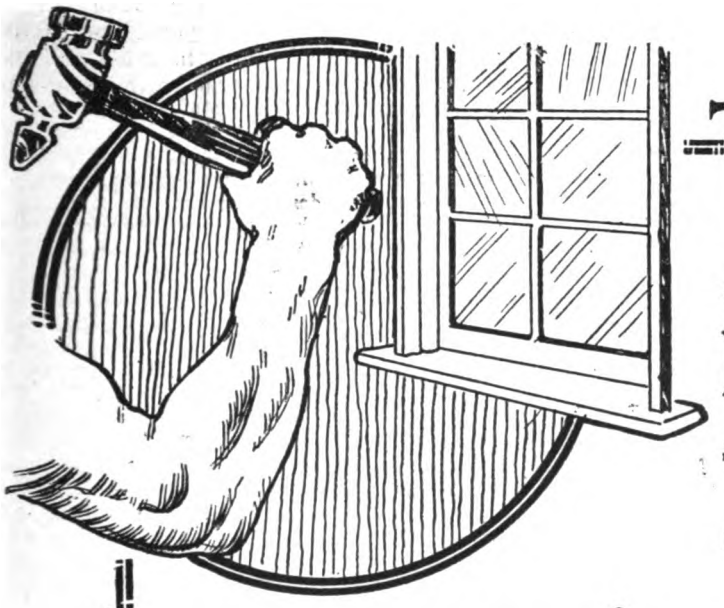
THE JUBILEE OF THE SURVEYORS' INSTITUTION.

It has not been possible, owing to the war, to celebrate the completion of the fiftieth year of the Institution in the manner which the occasion would in other circumstances have demanded.

The President, Mr. John Oakley, senior partner of the firm of Messrs. Daniel Smith, Oakley & Garrard, will, however, take the opportunity of the opening meeting of the session on Monday, November 11, to give an address dealing with the fifty years' history and work of the Institution.

The meeting will take place at 5 P.M. All interested are invited to attend. Non-members will be admitted on presenting their visiting cards.

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GENERAL.

THE Huntingdon Rural Council has appointed a committee to prepare a housing scheme.

MR. PHILIP G. ECKERSALL, recently engaged in the city engineer's department, Birmingham, has been appointed surveyor to the Penrith Urban Council.

THE formal opening of the annual exhibition of the Society of Scottish Artists took place on Saturday last at Edinburgh.

MR. BENJAMIN VOWLES, of 62 Cotham Road, Bristol, retired builder, who died on October 7, 1918, left estate of the gross value of £12,614 19*s.* 10*d.*

THE Manchester City Council have approved the scheme for acquiring Lake Haweswater, Westmoreland, at a cost of £8,000,000 sterling to extend the water supply of the city.

THE shortage of houses at High Wycombe is such that at a recent housing conference it was stated that for one vacant house there were sixty applicants.

SHEERNESS and Queenborough are asking the Sheppey Rural District Council to reconsider their previous decision and join with them in considering a modified scheme for a cottage hospital.

AT last week's meeting of the Greasbrough Rural Council it was decided to apply to the Local Government Board for permission to incur the cost of erection of a mortuary at Marske.

THE East Riding County Council have under consideration a scheme for the adaptation of Raywell House as a sanatorium for discharged soldiers and sailors. The estimated cost of adaptation and equipment is £3,500.

THE Salford Town Council have approved the Food Control Committee's recommendation for the provision of a national food kitchen in Upper Clemison Street. The cost of the necessary alterations to premises and equipment is estimated at £900.

A MEETING of Greasbrough ratepayers has approved a scheme for the erection of a public hall, offices, &c., at the foot of Potter Hill as a war memorial. Earl Fitzwilliam has given the site. The plans have been prepared by Mr. James Totty, architect, Rotherham.

THE Rowley Regis Urban Council have appointed a committee to prepare a town-planning and housing scheme for the district. On the basis of ten houses per 1,000 inhabitants about 400 new houses are required to meet the needs of the district.

AT a meeting of the Northern Centre Conciliation Board the application of the East Lancashire building trade operatives for an advance in wages was considered, and the Board awarded 1*s.* 5*d.* per hour to all labourers, this being an advance of 1½*d.* per hour, the increase to take effect on the first pay day after November 1.

THE Halifax Town Council have approved the recommendation of the Tramways and Electricity Committee, that the borough engineer, Mr. J. Lord, be instructed to prepare plans, specifications, and estimates for the building and plant required at the new electric power station proposed to be built at Copley.

IN building operations at a factory at Branstone, Burton-on-Trent, Arthur Plumbridge, stonemason, was killed, and Joseph Soame seriously injured as a result of a stone dislodged from a crane crashing through the scaffolding on which they were working.

THE Burnley National Kitchens Committee have decided to submit to the Director of National Kitchens a scheme for the adaptation of property in Rosegrove for the purpose of a national kitchen. The estimated cost of the building, alterations, and equipment is £1,450, and the premises could be used for the cooking of 5,000 portions per day, with restaurant accommodation.

COUNCILLOR MACKENZIE, president of the Arbroath Merchants' Association, at a recent meeting stated that in his opinion merchants should make a strong effort to bring industries to the town. He suggested that members who heard of anyone on the outlook for a site for a new industry should inform the Town Council, who would take the matter up. In the past two years Arbroath had been stagnant in this respect, and he thought it was time that Arbroath was getting a share of anything that was going so as to get industries increased.

THE Stoke-on-Trent Council have had under consideration the recommendation of the Electricity Committee in regard to the proposed extensions at the central power house that the modified scheme for plant extension, as proposed by Sir John Snell in his report, and estimated to cost £102 000, be approved. The scheme has been adopted, and the Council have decided to make application to the Local Government Board for sanction to borrow the necessary amount.

THE Lancashire County Council have had under consideration plans and estimates prepared by the County architect for the adaptation of Peel Hall, Little Hulton, near Bolton, as a sanatorium for the treatment of tuberculosis. The plans provide accommodation for forty male patients, together with the requisite staff within the existing hall. The cost of carrying out the scheme, which includes general structural alterations, painting, and decorating, drainage and sewage works, heating and hot-water supply, the provision of a destructor and disinfector, new gas main and fittings, and other miscellaneous requirements is estimated at £11,000, whilst the furniture and equipment is estimated to cost, at present prices, £1,800.

THE second meeting of the Industrial Council of the Building Trades of Great Britain (Building Trades Parliament) took place last week in Edinburgh. The administrative Committee of the Council was entertained to luncheon in the North British Railway Station Hotel by the president and vice-presidents of the Scottish National Building Trades Federation. Lord Provost Sir J. Lorne MacLeod and Mr. Alexander Darling, Master of the Merchant Company, were present, and the former, in welcoming the members to the city, spoke of the important nature of the work which would devolve on the Industrial Council at the present juncture in the affairs of the nation when so many schemes affecting housing and other matters were ready for attention.

MR. THOMAS HOWDILL, who had practised in Leeds as an architect since 1873, died at his residence, 32 Woodsley Road, on Saturday morning last. He was born at the Manor House, Tadcaster, in 1840, and was a descendant of an old Yorkshire yeoman family. He was one of the founders of the old Leeds and Yorkshire Architectural Society, now the Leeds and West Yorkshire Architectural Society, which came into being in 1876. In conjunction with his son, Mr. C. B. Howdill, he designed and erected over 300 chapels and schools in various parts of the country for the Primitive Methodist Church, and was also the architect for buildings erected in Wales, Ireland, and the Isle of Man. Mr. Howdill was a life-long Methodist, and for twenty-six years he held the position of hon. treasurer to the General Chapel Fund and Legal Defence Fund, and he was intimately connected with the Rehoboth Central Mission in Leeds. Up to a fortnight ago he was to be seen riding his tricycle in the streets of the city. He was twice married, and leaves a widow and one son.

THE "Manchester Guardian" states with reference to a site for the new opera house offered by Sir Thomas Beecham: "There are several sites in the city which are said to answer the requirements of a modern opera house alone. There are one or two which offer sufficient space for both a library and an opera house. But there is another problem connected with the administration of the city which cannot much longer be left unsolved. It is the problem of the lack of municipal office space. The Town Hall is already much too small for the government of Manchester. It has been proposed that the Town Hall annexe or extension, the opera house, and the library might be collected on one site, and if that proposal should be approved the site would have to be the one now covered by the block of property next to the Town Hall on the Lloyd Street side. Some of the Corporation overflow offices are already in this block. By this scheme the library might be placed in Mount Street opposite the Friends' Meeting House, and the main entrance of the opera house might face either St. Peter's Square or the Midland Hotel."

AT the annual meeting of the Leeds Provincial Building Society Mr. Joseph Henry (Lord Mayor elect) presided. In moving the adoption of the report and accounts, which showed large increases, except as to withdrawals, Mr. Henry said the amount invested in the society was £80,444 more than last year. The increase in the funds was as large as the combined increases of the past fifteen years. A sum of £151,935 was received from investors, as compared with £71,650 in the year before the war. Referring to the question of housing after the war, Mr. Henry said that in the past 95 per cent. of the houses had been provided by private enterprise, and the Government and local authorities should be careful not to discourage it. In Leeds, particularly, he did not see why private enterprise, with the help of building societies, should not provide all the houses required. During the past year his society could easily have lent, out of income, £250 upon each of 600 houses, and the large sums in Government securities would enable them to assist private enterprise to provide at least 1,000 houses annually for some years to come. To build garden cities of houses, let to yield only half interest on the cost, was to give preferential treatment to the tenants. That was a rotten foundation upon which to build.

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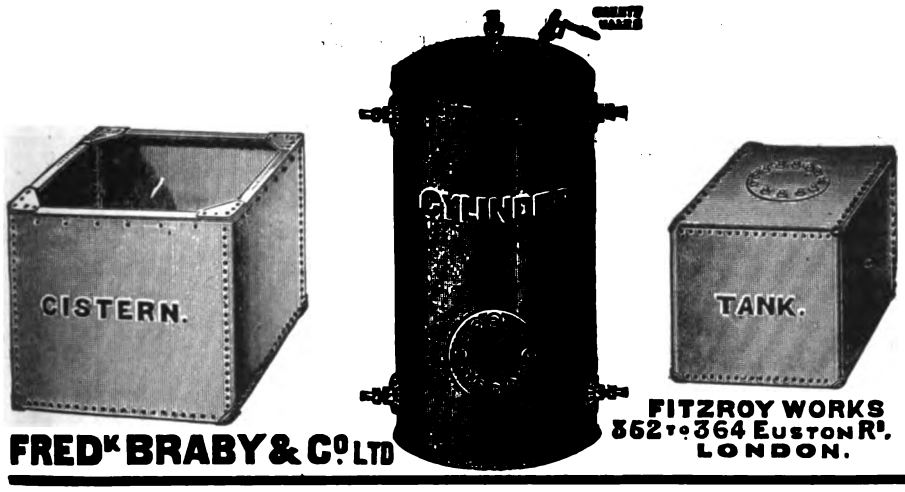
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PLAN: Casements partly opened.
ELEVATION: Windows closed.
PLAN: Left Casements folded back, Right partly folded.
SECTION.

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THE
Architect and Contract Reporter.
FRIDAY, NOVEMBER 15, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

CONTRACTS OPEN.

BRISTOL.—Nov. 22.—For reconstruction of single-floor transit shed, known as shed "A," Avonmouth Docks, for the Docks Committee. Mr. T. A. Peace, engineer, Dock Engineer's Office, Bristol. Deposit £5. Secretary of the Docks Committee, Docks Office, Bristol.

CARLISLE.—Nov. 22.—For outside painting works at police stations: Carlisle (Abbey Street), Cockermouth, Lazonby, Silloth, Whitehaven, Wigton, and also at Earl Street offices and stores, Carlisle. Mr. G. D. Oliver, F.R.I.B.A., county architect, Carlisle.

DEWSBURY.—Nov. 22.—For mason, joiner, plumber, &c., trades in mortuary alterations, for the Guardians of Dewsbury Union. Messrs. W. Hanstock & Son, architects, Branch Road, Batley.

KELLS.—Nov. 20.—For taking down, removing, and re-erecting at Kells the mission chapel at Blackbeck. Also for fencing site at Kells. Rev. E. Campbell, 3 Cross Street, Whitehaven.

NEWTOWN (MONTGOMERY).—Nov. 22.—For supply of shelving for 6,000 books, for the Montgomeryshire Village Circulating Library. Mr. L. Phillips, clerk to Education Committee, Newtown.

TENDERS.

ARGYLLSHIRE.

For repairing sea-walls and roadways at Strone Point and Blairmore, for the Cowal District Committee.

T. M'KELVIE, Strone (*accepted*) £185 10 0

BALLYSHANNON.

For repairs to labourers' cottages, for the Rural District Council.

P. DALY (*accepted*) £53 5 0

BUXTON.

For supply of a 36-in. single-faced sluice control valve on a 36-in. overflow standpipe at the inlet basin at the Stanley Moor reservoir, for the Town Council.

J. BLAKEBOROUGH & SONS, LTD., Brighouse (*accepted*) £205 0 0

CHELMSFORD.

For the provision and installation of a boiler in connection with heating apparatus at the public library, museum, and science and art school in Market Road, for the Town Council. Mr. P. T. HARRISON, A.M.I.C.E., borough engineer.

F. H. DENNIS, High Street, Chelmsford (*accepted*) £89 0 0

HENDON.

For repairs to the isolation hospital, for the Hendon Rural District Council.

STONEBRIDGE (*accepted*) £33 15 0

LONDON.

For supply of pumps, &c., for the St. Pancras Borough Council.

Accepted tenders.

Rees Roturbo Manufacturing Co., Ltd., two circulating pumps	£2,886 0 0
Strachan & Henshaw, completion of steel-work for coal-handling plant at King's Road station	2,777 0 0
Underfeed Stoker Co., Ltd., mechanical stoker	1,906 0 0

MR. THOMAS HOWDILL, A.R.I.B.A., architect and surveyor, died last week.

THE death is announced from wounds received in action of Lieutenant-Colonel Claude Swanwick Worthington, D.S.O., the second surviving son of the late Thomas Worthington, F.R.I.B.A., of Broomfield, Alderley Edge, Cheshire.

THE Stirling water supply having been inadequate during the recent dry summer, the Water Commission has resolved to construct an additional reservoir at the close of the war.

THE Durham City Council have submitted to the Local Government Board their plans of a housing and town-planning scheme. They consist of the erection of three groups of houses in Framwellgate, Elvet, and Gilesgate, the pulling down of considerable dilapidated property, and the erection of bridges across the Wear and the making of a new road from Old Elvet to Shencliffe Bridge.

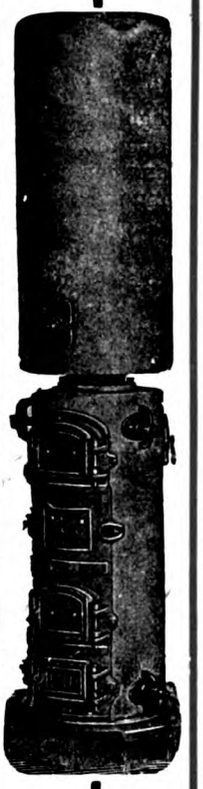
LAST week the County Council of Londonderry were complainants against Samuel Reilley, road contractor, Tartnakelly, and his sureties (Michael Macartney, Limavady, and David Glendinning, Drumreighland) for failing to comply with a magisterial order directing a road contract in dispute to be carried out by the defendants. The amount of Reilley's bond was £603. Mr. C. L. Boddie (county surveyor) said no work in connection with the contract had been carried out. The Bench made an order for the payment of one year's contract (£100 10s.) with costs.

LIEUTENANT S. RANK, R.G.A., son of Captain T. W. and Mrs. Rank, of Spring Bank, West Hull, was severely wounded in action on October 24, and died the same day. He was thirty-three years of age, and married. Educated at the Hull Municipal Technical College, he served his articles as an architect with the firm of Broderick, Lowther & Walker, Hull, and joined the East Riding Territorial R.G.A. in July 1916, receiving his commission in February 1917. His Commanding Officer writes: "He never failed in his duty, and was the finest type of man I ever met. By his frank manner and good nature he had endeared himself to officers and men alike."

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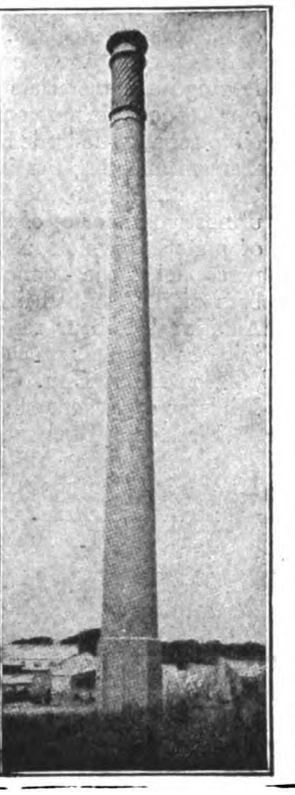
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MATERIALS FOR INDUSTRY.

THE War Cabinet recently set up a Cabinet Committee to deal with post-war priority questions. This Committee consists of General Smuts, the President of the Board of Trade, the Minister of Labour, the Minister of Shipping, the Minister of Munitions, and the Minister of Reconstruction. The secretary is Col. Byrne, C.M.G., 11 Pall Mall, London, S.W. A Standing Council on post-war priority has now been appointed to assist the Cabinet Committee. The Council has already had before it a survey of the existing stocks of the more important raw materials, and is giving urgent consideration to the question of releasing such materials from any form of control at the earliest possible moment. It is the intention of the Council to consult the trade bodies concerned with regard to any matters affecting the industries they represent, and, by taking them into the Council's confidence, to make the utmost possible use of their organisations in any allocation of materials which may be found to be necessary. The personnel of the Council is not yet complete. The members of the Council already nominated are given below. Additional Labour representatives have been invited to join the Council:

The Right Hon. Christopher Addison, M.D., M.P., Minister of Reconstruction (President).

Sir Henry Birchenough, K.C.M.G. (Chairman).

Sir Kenneth Anderson, K.C.M.G. (Orient Steam Navigation Company), Ministry of Shipping.

Mr. H. R. Armitage, Bradford Dyers' Association.

Mr. J. T. Brownlie, Amalgamated Society of Engineers.

Colonel Byrne, C.M.G., Secretary, War Priorities Committee.

Mr. J. Carmichael, Contractor, Wandsworth.

Mr. J. H. Clapham, C.B.E., Litt.D., Board of Trade.

Sir Sydney Henn, K.B.E., Director of Priority, Army Contracts Department.

Mr. W. J. Larke, O.B.E., British Thomson-Houston Company, Ministry of Munitions.

Sir Peter McClelland, K.B.E. (Duncan, Fox & Co.).

Sir Herbert Rowell, K.B.E. (R. and W. Hawthorn Leslie & Co.).

Sir David Shackleton, K.C.B., Secretary, Ministry of Labour.

Mr. Wallace Thorneycroft (Lochgelly Iron and Coal Company, and Steel Company of Scotland).

Mr. Alexander Walker (John Walker and Sons, Kilmarnock), Ministry of Reconstruction.

Mr. J. Wormald (Mather & Platt), Chairman of the Industries Committee.

The Joint Secretaries are Mr. T. R. Gardiner, Ministry of Reconstruction, and Major G. D. Hazzledine, Board of Trade.

ELECTRIC LIGHT AND THE PART IT HAS PLAYED IN THE PROSECUTION OF THE WAR.

NORMAL men are endowed with five senses—touch, sound, taste, smell and sight. Of the first four, few are absolutely essential in the business of waging war either in the front lines or in the important industrial activities behind the lines. The last, the sense of sight, is so important that it dwarfs the others combined, by comparison. Blind men are the least useful in these times. The sense of sight is, of course, directly dependent upon light, for without light there can be no sight. The very important part lighting plays, therefore, is obvious. The gigantic scale on which this war is being waged calls for twenty-four hours a day of activity in the different fields of endeavour, and artificial lighting, therefore, spells the difference between a twelve-hour day war and a twenty-four-hour day war. Perhaps many of us have not realised to what extent the ordinary peaceful occupation of producing light enters into warfare.

The foregoing statement emphasises the great importance of good lighting methods to secure the proper and most efficient use of light. Many users of light—manufacturing establishments, factories, workshops—do not realise that factory lighting has been entirely revolutionised during the last five or six years. The best available lighting prior to 1913 is, by to-day's standards, obsolete and more costly to keep than it is to replace, The new half-watt or gas-filled types of lamps, such as the "Mazda," have made the raw material—light—so cheap that there is no excuse for any but the most adequate and satisfactory illumination—brilliant light but glareless, well-diffused effective illumination.

It is only under sufficient and properly distributed lighting that workmen can produce at full capacity. Good lighting eliminates accidents, increases the quality and the quantity of output, conduces to the best of health, spirits and contentment of the workers. As light and the lighting industry are in their way contributing a very essential part of the national programme in connection with the war, it is the duty of every manufacturer and user of light to see that light is employed in the most effective manner, by using the most efficient lighting equipment. Every care should be taken to see that light is not wasted as it is in the majority of cases with out-of-date and inefficient lamps and lighting equipment.

THE surveyor of the Newcastle Urban Council has been instructed to submit plans for the conversion of the Annersley Arms into a town hall.

THE Leeds Corporation have been approached with a view to the purchase of land belonging to them at the junction of Woodhouse Lane and Wade Lane for the purpose of erecting premises for the Y.W.C.A.

DARFIELD Urban Council have two schemes in hand to improve the housing accommodation of their township. One, at Nanny Mar, has already received the sanction of the Local Government Board. Their second scheme embraces a site adjoining Balkley Lane, and here the Council propose to purchase twelve acres of land from Earl Fitzwilliam.

AT the last meeting of the Sowerby Bridge Council it was reported that the Improvement Committee had instructed the surveyor to proceed with the scheme for the erection of about 200 houses, and that the owners of building land in the district be asked to submit prices for building sites.

THE General Purposes Committee of the Stockton Corporation have instructed the surveyor to report upon the suitability of the premises adjacent to the Borough Hall, and also a site in Church Row for the purposes of a town hall and municipal offices.

THE Local Government Board have held an inquiry into the application of the Bootle Town Council for sanction to borrow £32,825 for the purchase of a plot of land for a housing scheme after the war. The site, which was in Orrell Ward, covered an area of about 50½ acres, and had been offered at £650 an acre by Lord Sefton, permitting of the erection of 636 houses.

A FINE of £10 was imposed by Sheriff Craigie at Glasgow Sheriff Court on John Train & Taylor, contractors, Glasgow, for having on six successive Sundays in May and June employed labour on building work at the new Glasgow Corporation electric power station, Dalmarnock, without a licence, and contrary to the Building Restrictions Order (Sunday Work), 1917.

THE Rotherham Corporation Housing Committee has decided to recommend Mr. C. A. Broadhead, A.R.I.B.A., P.A.S.I., acting borough architect at Swansea, for the appointment as architect to the Corporation. Mr. Broadhead has planned a scheme to cover 120 acres of hilly land with 1,400 houses. He has also developed 40 acres, and has had considerable experience in housing schemes in addition to being successful in town-planning competitions.

A CALCULATION that 17,000 new houses will be required in Manchester after the war appears in a report issued by the Housing Conditions Special Committee of the Corporation. The Committee state that building should commence without delay after the war, as at least one third of these houses are needed at once. Private builders are willing to undertake the building of 4,000 houses in twelve months if the Corporation will provide the necessary facilities.

THE "Manchester Guardian" states that in Alberta there is a village the houses of which have been constructed without nails. These were built by Ruthenian immigrants, and are of the typical Ruthenian style—long, pitch-roofed, thatched, and wide in the eaves Even the door, an affair of slender twigs, woven and laced together, swings on home-made hinges and is latched with a wooden hasp. The floor is of hewn logs unnailed. The roof is a wonderful fabric of poles and cross-woven wheat straw 10 inches thick, packed tightly and solidly, and laid with such care that it will endure any weather for twenty years.

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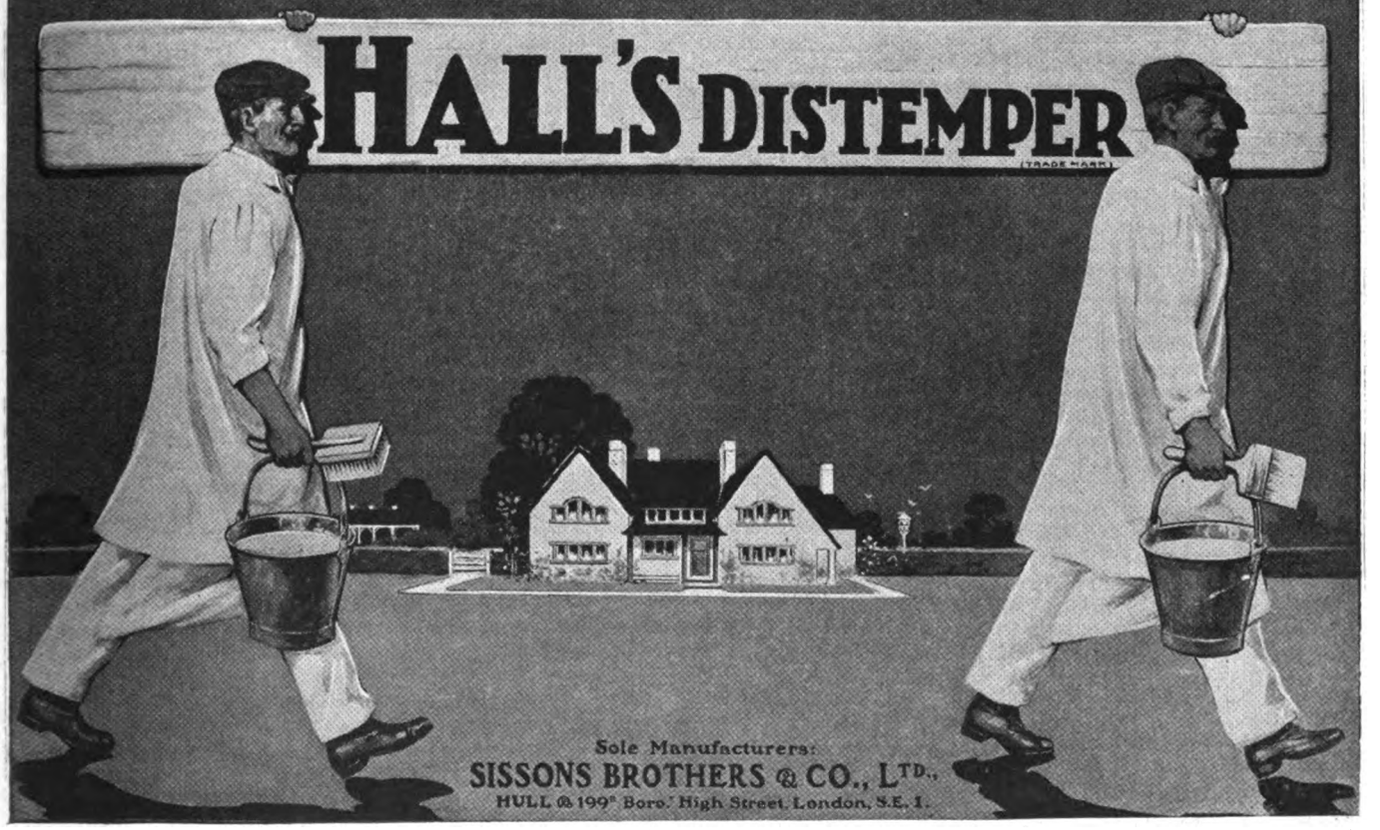
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GENERAL.

MAJOR PERCY JOHNS, R.F.A., the borough surveyor of Maidenhead, has been promoted to Lieutenant-Colonel.

THE estimate of the surveyor, Mr. W. H. Cousins, of the requirements of new houses in the Bridgwater district is 230.

THE death has occurred at his residence in Aberdeen of Mr. James Milne, a well-known member of the Aberdeen Artists' Society.

THE design of the oak screen has been on view in the cathedral at Chelmsford which it is proposed to erect at a cost of £300 to the memory of the late Mr. Fred Chancellor.

THE death took place on Wednesday, the 6th inst., of Mr. Frederick William Lloyd, for many years building surveyor to the Birmingham Corporation.

ON Thursday of last week a serious fire broke out at the leather factory of Messrs. J. Sydney Smith, at Bramley, Leeds, damage being caused to an amount estimated at £100,000.

Two stained-glass windows have been placed in the choir of St. Albans Cathedral to the memory of Dr. Lawrance, first Dean of St. Albans and for some time Chaplain-in-Ordinary to the late Queen Victoria.

AT the general meeting of the Royal Institute of British Architects to be held on Monday next at 5 P.M. Mr. William Dunn, F.R.I.B.A., will read a paper entitled "A Housing Scheme at Chepstow."

MR. OTTO BAERLEIN, a former Serbian Consul, left to the Alderley (Cheshire) Council a sum of £60,000. The amount will be used for the purpose of erecting a new district hospital.

MR. R. READ, the borough surveyor of Gloucester, has received sanction to obtain the assistance of Mr. H. A. Dancey to assist him in the preparation of plans for various types of houses for consideration of the committee appointed to deal with the question of dwellings for the working classes.

ON Saturday last the Newport (Mon.) Town Council decided to promote a Bill in Parliament to provide an additional water supply at an estimated cost of £1,000,000. The water is required for new works which are to be constructed in the district.

AT a meeting of the Smethwick Town Council it was decided to obtain permission to commence the work to provide extra accommodation at the Holly Lane hospital for the purpose of treatment of tuberculosis. The proposed extension is estimated to cost £4,800.

SIR ARTHUR PEARSON, BART., makes an appeal asking that the men who have brought about the triumphant result of the war should not be forgotten, particularly asking for assistance for the splendid work which he and his committee are carrying on at St. Dunstan's, Regent Park, London, N.W. 1.

THE death took place on October 30 of Lieutenant Alexander W. Ogalvie at the age of thirty-six. He was a director of Messrs. Singer & Sons, Ltd., art metal workers, of Frome. Lieutenant Ogilvie was attached to the 65th Siege Battery, and was gassed as he was getting his guns into action.

A CONFERENCE on the Trade Union of the Future will be held under the auspices of the Industrial Reconstruction Council on Tuesday, November 19, at 6 P.M., in the Hall of the Institute of Journalists, 2 and 4 Tudor Street, E.C. 4. The subject will be introduced by Mr. George A. Isaacs, General Secretary of the National Society of Operative Printers and Assistants, after which the discussion will be open. No tickets are necessary.

AT the last meeting of the Truro Rural Council it was reported that the Local Government Board had written expressing regret that the Council had postponed a decision on the housing question, and calling attention to a previous resolution by the Council that six houses were needed at St. Erne, four at St. Just-in-Roseland, four at Kea, and fifteen at Ladock. It was decided to hold a special meeting to meet representatives from the parishes mentioned.

AT the last meeting of the Fraserboro' Town Council the surveyor submitted plans for the proposed town-planning scheme, and Bailie Anderson fully expounded them. He said Lord Saltoun sympathised with the scheme and cordially supported the movement. The ground occupied extended between Dennydyff Road and College Bounds. On the motion of Mr. Reiach, seconded by Bailie Gordon, it was agreed to adopt the town-planning scheme according to the surveyor and obtain the sanction of the Commissioners.

THE Garden Cities and Town-Planning Association has arranged a week-end school for lecturers and speakers willing to address meetings under the auspices of any organisation on the housing question. The course will begin on Friday, November 29, and will last until Monday, December 2. Most of the work will be done at the Central Buildings, Westminster, but there will also be inspection of the Hampstead and Letchworth garden suburbs and a dinner at the House of Commons.

"OUR Norman Cathedrals and their Builders" was the title of an extremely interesting lecture delivered by Mr. W. Archer Clark, of Birmingham, to the members of the Sheffield Photographic Society, at the Builders' Exchange, Sheffield. Wih the aid of a series of beautiful slides which appeared to have caught some of the glamour and romance of the Middle Ages, the lecturer conducted his audience through many English fanes, most of which were served by the Benedictines or the secular canons. He attributed the spaciousness of the grounds surrounding the cathedrals to their monastic origin, and emphasised the fact that when these churches were first erected they were not the piles of cold grey stones they have now become, but were many-tinted, and as beautifully coloured as the missals with which they were associated.

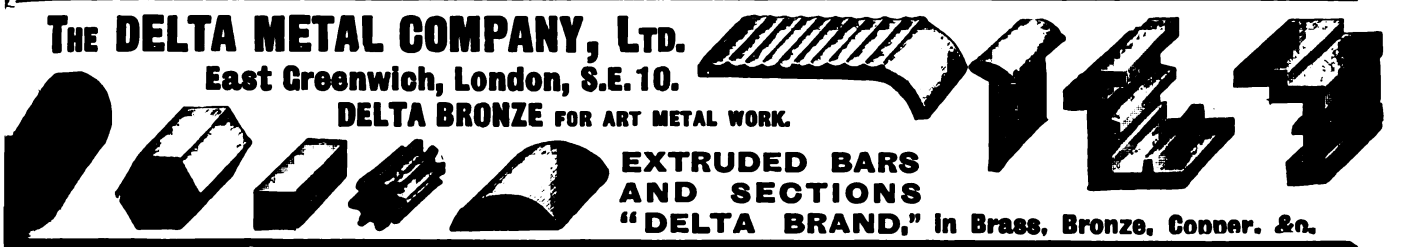
THE annual meeting of the West Kent Building Trades Employers' Asssociation was held at the offices on Tuesday evening, November 5, under the presidency of Mr. P. Down (Messrs. J. Jarvis, Ltd.), who, in moving the adoption of the report, mentioned that all leading employers in Tunbridge Wells and Tonbridge had become members and strongly advocated the desirability of still further increasing the numbers of the association. Arrangements were being made for the setting up of a local Conciliation Board forming part of the National Conciliation scheme in the building trade. The officers for the new year were appointed as follows:—President, Mr. E. J. Strange; Vice-Presidents, Messrs. F. Huggett and W. R. Hobbs; Executive Council, Messrs. Bates, Down, Goodwin, Jones, Judd, and Stoneley. The retiring officers were heartily thanked for their services.

As showing the value of good lighting in connection with the reduction of accidents, the records of the Travellers' Insurance Co. of the United States give the following interesting results. Of 91,000 industrial accidents recorded in 1910, 23.8 per cent. were due directly or indirectly to poor lighting. It should be noted that this record refers only to the accidents investigated by this one insurance company. For the same period an estimate is made that puts the total industrial accidents of the United States at 500,000, and, on the basis of the Travellers' Insurance Co.'s percentages, about 125,000 of these accidents were chargeable to the lack of proper illumination eight years ago. Since that time insurance companies have studied lighting conditions in factories in order to classify the risk and, as proper lighting resulted in lower premiums, it was not long before factory managers and their engineers worked out better methods of illumination. The result of this is that during the last two or three years the improvements in lighting have caused a reduction of at least 30 per cent. in accidents which are chargeable to the lack of proper illumination.

THE necessity of unity amongst the engineering profession in order to maintain the strength of the nation after the war was emphasised by Prof. J. Wemyss Anderson, in his inaugural address as the newly elected president of the Liverpool Engineering Society. Not only must engineers combine amongst themselves, he observed, but they also must combine with the leading financial and commercial organisations that were going to be so strong a feature in our industrial future. Further, they must combine under the auspices of the State to bring about those reformations that only the State could enforce. Wise State help the engineer would never decry. State interference he would never tolerate. The war had shown us our weakness in iron and steel production, and our great strength when faced with difficulties. Means must be found to maintain this war effort. The problem of the materials of construction—of iron, steel, non-ferrous metals, and timber—was a very complicated one. It meant increased production and economical construction. If engineers were made to thoroughly understand our limitations they could and would shape their course accordingly. With a view to easing the world's shortage of foodstuffs after the war the speaker urged that agricultural-implement makers should be induced to take over munition centres and work them in the interests of increased production of farm produce. It was to be hoped that the engineer would get into closer touch with the bankers. The engineer often saw possibilities of development which questions of finance prevented him attacking. Sound finance and progressive engineering in harness together would put the country far on the road to commercial and industrial success.

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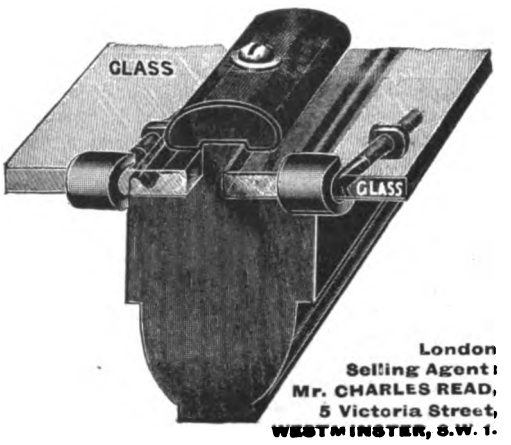
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THE

Architect and Contract Reporter.

FRIDAY, NOVEMBER 22, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

TENDERS, ETC.

*** *As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.*

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

TENDERS.

BRANDON (DURHAM).

For alterations at Lymington Terrace sewage works, for the Brandon and Byshottles Urban District Council.

ARMSTRONG (*recommended*) £60 0 0

DOVER.

For supply of school materials, for the Town Council.

ARNOLD (*accepted*), schedule A 25 per cent. off published prices and £1,715 for schedule B.

DUNBAR.

For re-roofing the corn exchange, for the Town Council.

R. DONALDSON (*accepted*) £42 5 4

LONDON.

For works, for the London County Council.

Accepted tenders.

Southern outfall, Seagers, Ltd., Dartford, cast-iron frames, £235.

Abbey Mills pumping station, W. Beardmore & Co., Ltd., Glasgow, crankshaft, £160.

WOLVERHAMPTON.

For erection of timbers, platform, and railings at electricity works, for the Corporation.

GIBBONS, Dudley (*accepted*) £188 0 0

For supply of electric vehicle, for the Electricity Committee.

Accepted tenders.

Battery for electric vehicle, Chloride Electrical Storage Co., Manchester, £145.

Steam pipes, J. Spencer, Ltd., Wolverhampton, £210.

PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 119,673 (Sept. 12, 1917).—W. N. Haden and C. I. Haden, St. George's Works, Trowbridge, Wiltshire.—Heating and cooling systems for buildings.

119,686 (Oct. 8, 1917).—J. W. Cryer, Green Lane, Bolton, and Nathan Mangnall, 126 Church Road, Bolton, Lancs.—Locking mechanism in connection with hoists, lifts, and the like.

119,701 (Oct. 11, 1917).—R. C. Green, Ltd., Vulcan Iron Works, Winchester.—Hydraulic rams for raising water.

119,710 (Oct. 15, 1917).—Sam Deards, West House, Harlow, Essex.—Reinforced roofing tiles.

119,711 and 119,712 (Oct. 17, 1917).—E. F. Morris, M.A., Holly Bank, Roby, near Liverpool, and T. N. C. Nevill, Burtonhead Road, St. Helens, Lancs.—Manufacture of a white pigment, and, 119,713 (Oct. 17, 1917), manufacture of white pigments.

119,727 (Oct. 25, 1917).—J. E. Webb, 11 Poultry, E.C.—Fire extinguishers.

119,730 (Oct. 30, 1917).—John Anderson, 6 Warwick Street, Heaton, Newcastle-on-Tyne.—Cutter blades for wood planing and moulding machines.

119,737 (Nov. 13, 1917).—Chas. Orr, Kearney Cross Road, Foleshill, Coventry, builder and contractor.—Ventilating apparatus for buildings.

119,777 (Jan. 14, 1918).—Robert Gillespie, Kelburn Cottage, Prestwick, Ayrshire.—Flues of domestic fireplaces.

119,801 (Feb. 20, 1918).—Sheard Wood and Wilfred Robertshaw, Well Lane Works, Batley, York.—Barless firegrates.

119,804 (March 4, 1918).—John Patterson, Lynwood, Hawthorn Gardens, Monkseaton, Northumberland, and James Fergusson, 55 Jesmond Dene Road, Newcastle-on-Tyne.—Domestic fire stoves, ranges, and the like.

119,822 (March 26, 1918).—Christian Sorensen, Pasnas pr. Arendal, Norway.—Electrical heating apparatus.

119,834 (May 10, 1918).—A. D. Furse, 95 St. James Avenue, Beckenham, Kent.—Manufacture of manure from house, town, and other refuse.

119,849 (Aug. 30, 1918).—J. W. Lindberg, 21 Storgatan, Stockholm.—Locks.

119,645 (Oct. 8, 1917).—J. W. Cryer, Norland, Green Lane, Bolton, and Nathan Mangnall, 126 Church Road, Bolton.—Locking mechanism in connection with hoists, lifts and the like.

119,886 (Oct. 2, 1917).—A. E. Guest, Tilton Cottage, West Byfleet, Surrey, builder.—Fixing of sheet iron coverings to the walls and roofs of buildings.

119,901 (Oct. 16, 1917).—William Coles, 11 Laburnum Road, Eaglescliffe S.O., Co. Durham.—Fire appliances.

119,910 (Oct. 18, 1917).—F. G. Jacobs, 119 Leuvehaven, Rotterdam, Holland, and P. W. Roemer, jun., 53B Stationsweg, Rotterdam, Holland.—Flushing syphon tanks or cisterns.

119,912 (Oct. 18, 1917).—E. J. Sadgrove, architect, 9A Little James Street, Gray's Inn Road, W.C. 1.—Sheets, slabs and the like units of building material.

119,918 (Oct. 24, 1917).—O. J. Monssette, Driggs Avenue, Cr. North Street, Brooklyn, Kings, N.Y.—Brick machines.

119,921 (Oct. 25, 1917).—Robert Melbourne, 26 Green Street, Burton-on-Trent, Staffs.—Planing machines for wood, more particularly for working parts of disused boxes.

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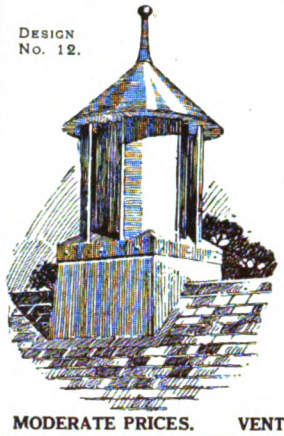
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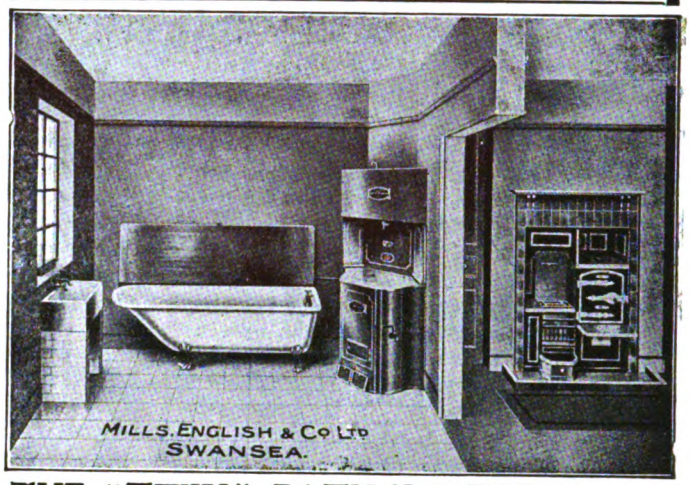
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119,922 (Oct. 25, 1917).—A. F. Berry, The Tricity House, 48 Oxford Street, W.—Guards for electric heat radiators, gas fires and the like.

119,934 (Nov. 10, 1917).—H. C. Tofield, 181 City Road, Birmingham.—Jointed arms or brackets for carrying incandescent electric lamps or incandescent gas lamps.

119,935 (Nov. 10. 1917).—G. E. Johnson and Geo. Johnson & Co., Thompson Street, Belfast.—Water heaters.

119,949 (Dec. 7, 1917).—C. H. Meigs and F. A. Epps, 200 5th Avenue, New York, U.S.A.—Art of extinguishing fires.

119,950 (Dec. 13, 1917).—H. N. Stubbs, 48 Hibbert Road, Barrow-in-Furness.—Protractors.

119,955 (Dec. 21, 1917).—John Morgan, Sunnybank, Pontardawe R.S.O.—Means for preventing damage to pipes by frost.

119,966 (Jan. 12, 1918).—Chance & Hunt, Ltd., A. E. Holley and H. W. Webb, M.Sc., Chemical Works, Oldbury.—Acid resisting cement.

119,973 (Jan 23, 1918).—Edward Shanks, Wellington Place, Belfast.—Water closets.

119,987 (March 8, 1918).—C. H. Heathcote, architect, and Samuel Osborne, building engineer, Lloyds Bank Buildings, King Street, Manchester.—Reinforced concrete constructions.

120,012 (June 27, 1918).—Henry Hudson, 22 Horace Street, Malvern, Victoria.—Inserts for concrete and the like to receive nails and other fasteners for frames, skirtings, mouldings, brackets and the like.

Any of the above specifications may be obtained from J. D. Roots.

EXTENSIVE damage to property in the neighbourhood was caused by an explosion which took place in Liverpool last week by sewer gas. Several persons are reported as injured.

THE Grimsby Hospital Committee have decided as a war memorial to erect a convalescent home at a cost of £50,000. The Marquis of Lincolnshire has offered to present a site of 38 acres for the purpose.

A SCHEME is under consideration in the Orkney Isles for the drainage of some fresh-water lochs, by means of which a considerable area of valuable land is expected to be recovered for cultivation. The Loch of Bardhouse, in the Isle of Birsay, is reckoned as covering nearly 1,000 acres of good land, which when dried would be available for crops.

THE Scottish Ecclesiological Society held the first meeting of the session in St. Cuthbert's Hall, Edinburgh, on Saturday. The Rev. Percy Herford presided over a large attendance. The Rev. Professor Cooper delivered a lecture on Elgin Cathedral. He spoke of the memorials which would be erected to the memory of the noble men and women who had given their lives in the cause of liberty and truth, suggesting that no better tribute could be paid to them than by restoring from their desolation the ancient cathedrals and churches of the land. He pointed out that of the fourteen Scottish cathedrals, seven were now entire, while three more were partially in use as parish churches, and four only in ruins. These four, from their history, made a strong appeal to patriotic and religious feelings, and he hoped to see them restored. Dr. Cooper proceeded to sketch the history of Elgin Cathedral, alluding to its burning by the Wolf of Badenoch and its subsequent rebuilding, its gradual decay, and its position to-day as the ruin of the most beautiful structure Scottish art could produce.

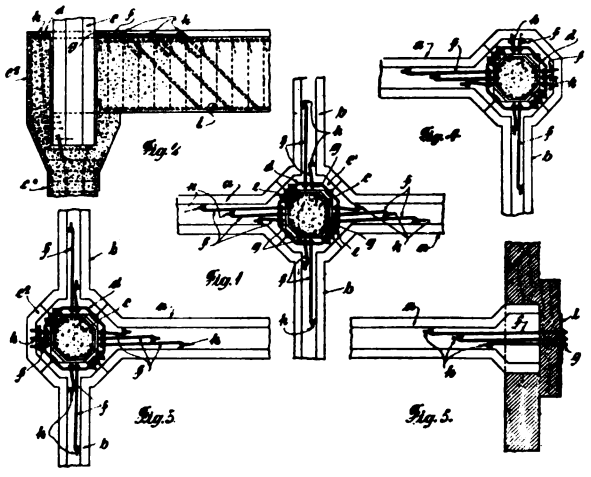
THE report of the Parliamentary Committee on Housing states:—The returns give a shortage of 109,000 working-class houses in Scotland. The local authorities have expressed their willingness to prepare schemes subject to substantial financial assistance from the State for 98,540 houses in Scotland. From the local authorities' standpoint, the greatest difficulty under present conditions is the housing in districts controlled by small authorities. An intelligent Commissioner would advise upon the grouping of these authorities and assist in the preparation of joint schemes. The problem of rural housing also requires special treatment and assistance. The responsibilities of the various housing authorities should be defined, and these responsibilities translated into obligation. A Housing Department, such as that suggested, with its staff of local Commissioners, could expedite the arrangements that will have to be made for commencing building operations immediately after the war.

BRITISH PATENT SPECIFICATION.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

The first date given is the date of application; the second, at the end, the date of the advertisement of the acceptance of the completed specification.

No. 119,987 (March 8, 1918).—Reinforced Concrete Constructions.—C. H. Heathcote, architect, and Samuel Osborne, building engineer, both of Lloyd's Bank Buildings, King Street, Manchester.—This invention refers to reinforced concrete constructions of the type in which the constructional elements, such as columns, beams and slabs (or columns and beams) are made separate from each other previous to being placed in position. Fig. 1 is a plan of two main beams and two secondary beams resting upon a column. Fig. 2 is a side sectional elevation. Fig. 3 is a plan of one main beam and two secondary beams, resting upon a column. Fig. 4 is a plan of one main beam and one secondary beam resting upon a column. Fig. 5 is a plan of a main beam resting in a wall, the wall being in section. In fig. 1, *a a* are the main beams, *b b* the secondary beams, and *c* the superposed column, each beam having a groove or channel in its top face, and the channels of the several beams opening into an annular channel c^1 common to all around the column *c*. Within such channel c^1 and concentric to the column *c* is a metal hoop *d*, such hoop being preferably made in two half parts to allow of its being placed in position after the column *c*, and the overlapping ends of the half parts being joined to each other by bolts and nuts *e* as shown. To the said hoop are adjustably connected the additional metal rods *f*, these latter at one end being screw-threaded and passing loosely through holes in the hoop *d* and upon that side of the hoop section nearest the column *c* being provided with a nut *g*. At its other end each rod *f* is bent to form a hook, whereby it may engage an eye *h* protruding above the bottom face of the channel in the adjacent beam. With the rods of each beam hooked to the eyes of such beam, and the nuts 8 of all the rods tightened up, the several beams are mechanically and concentrically tied to each other around the column *c*. The eyes *h* in the beams will preferably be the protruding bent ends of the button reinforcing rods *i* of the beams (see fig. 2), and with such rods of uniform length but arranged one slightly in advance of the other, as shown, the eyes will lie at different distances from the column *c*. To allow for such varying distances the rods *f* will vary in length. By making use of the rods *i* for the rods *j* to engage, the mechanical reinforcement of the beams is continued across the beam ends and the column, and therefore, in the case of a whole floor or roof, the reinforcement is continued from wall to wall. With the hoop *d* and rods *f* duly placed in position and the rods *f* tightened up to ensure of the beams being firmly united, cement grouting or concrete is placed in the channels of the beams, and also in the channel c^1 around the column *c*, the rods and hoop being completely covered up, and



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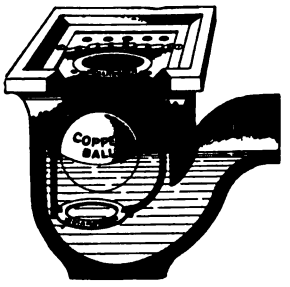
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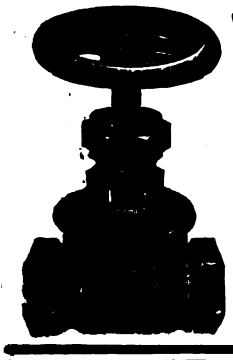
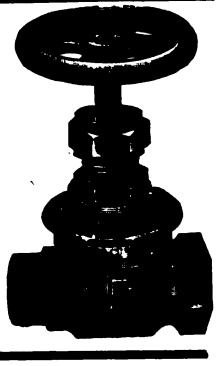
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the channels filled in, until level with the top faces of the beams. Upon the grouting setting hard it becomes effectually keyed to the beams, and thereby serves to tie the rods to the beams and to continue the strength of the beams across their abutting ends and support. The channels in the beams are preferably of slightly dovetail shape in cross-section to help in keying the grouting to the beams. In figs. 2 and 3 the cap of the lowermost column *c* is formed with an upstanding nib or projection c^2, shaped, in plan, to fill the space that would otherwise be left on that side of the superposed column *c* opposite the beam *a*. Through such projection extends certain of the longitudinal reinforcing rods of the column, such rods, after extending above the bottom of the channel at the top of the projection, being bent downwards and terminating in the body of the column (see fig. 2). The protruding portion of each rod forms an "eye" *h*. To each of such eyes is hooked one of the rods *f*, the rods being comparatively short, but affording the necessary adjustable tie between the lower column and the hoop *d* on one side of the superposed column *c*, whilst on the opposite side of said column the hoop is adjustably connected by the further rods *f* to the beam *a*, the secondary beams *b b* being connected to the hoop by further rods, as shown. In supporting the end of a main beam in or on a wall (see fig. 5), the beam end will preferably be widened out as shown, or it may be similar in shape to the end which rests on a column. For tying the beam to the wall the screw-threaded ends of the rods *f* pass through the wall, and also through a plate *l* lying against the outer face of the wall, nuts *g* on the rods serving to tension the rods relatively to the eyes *h* in the beam.—Oct. 30, 1918.

THE Leiston Urban Council scheme will provide for 100 houses, and the war memorial the erection of a hospital.

CAPTAIN FRANCIS RENTON BARRY, A.R.I.B.A., East Surrey Regiment, previously reported wounded and missing, is now reported killed or died of wounds. He was the second and only surviving son of the Rev. F. Renton Barry, of the Presbyterian church, Richmond, Surrey.

AT the meeting on Thursday of last week of the Leiston Urban Council, Colonel Garrett presiding, the resignation of Mr. Wilson, the surveyor, was announced on his obtaining another appointment. It was resolved to advertise for a successor at a salary of £200 per annum.

THE "Liverpool Daily Post" states that "Schemes are in hand for the immediate resumption of building in the city. Many important constructional undertakings were suspended when the Government laid an embargo on building operations, as, apart from the cathedral and minor ecclesiastical edifices, several large business establishments had embarked upon extensive alterations. It has been said that Liverpool had more half-completed buildings than any other town in the North of England, and if the speedy return of the builders expedites the removal of the unsightly advertising 'stands' the city will gain from an æsthetic standpoint."

THE plans of the following new buildings in Aberdeen have been passed by the Plans Committee of the Town Council:—Alterations in connection with the premises Nos. 1 and 3 King Street, for Messrs. Gorrod, Davie, Kemp, Walker & Co., grain merchants, per Mr. John Cameron, architect; additions in connection with the dwelling house No. 75 Beechgrove Terrace, for Mr. Charles W. Gordon, residing there, per Mr. William Dawson, house agent; additions to Combworks at Berryden for the Aberdeen Combworks Co., Ltd., per Mr. William S. Boice, engineer; fish kiln and store on the south side of Sinclair Road, for Mr. John Webster, fish-curer, per Mr. George Watt, architect; fish kiln on the south side of Sinclair Road, for Mr. William Taylor, junior, fish-curer, per Mr. George Watt, architect; alterations in connection with premises on the west side of Forbes Street, for the National Meat Products, Ltd., per Messrs. Brown & Watt, architects; addition to premises at No. 100 Hutcheon Street, for the Aberdeen Flesher Incorporation, per Messrs. Brown & Watt, architects; alterations in connection with the Electric Theatre, 431 Union Street, for Messrs. F. S. Cruickshank & Son, the lessees, per Messrs. Sutherland & George, architects; alterations on the north side of Commercial Quay for the Walker Steamship Trawling Co., per Mr. G. Bennett Mitchell, architect.

GENERAL.

THE Manchester housing scheme will be for 14,000 to 15,000 houses, mainly for the working classes.

HONITON Town Council has decided on the purchase of 12 acres for the erection of houses (eight to the acre) and the provision of a recreation ground.

MR. WILLIAM BURTON JURY, head of the firm of W. B. Jury & Sons, builders and contractors, Camden Road, Tunbridge Wells, died on Thursday of last week aged seventy-seven years.

MR. J. R. WIGFULL, A.R.I.B.A., of Sheffield, who has himself been suffering with influenza, has sustained the serious loss of both his wife and his eldest son, victims of the scourge.

THE Boston Rural District Council have accepted the tender of Mr. J. W. Pinder, of Boston, for the erection of a bridge over the Maryland drain at Amber Hill at a cost of £650.

THE Boston Rural Council housing scheme will make provision for the erection of 200 working-class houses. The Council have decided to push on the scheme of securing building sites.

MR. W. T. FARR, of Mumbles, in addition to his generous donation of £10,000 to the advancement of technical education in Swansea, has presented an amount of £5,000 to the Swansea Hospital.

THE Pensions Committee are acquiring empty houses in Queen's Gate, London, to provide a hostel for 200 wounded soldiers, while repair and readjustment of their artificial limbs are being effected on the premises.

As a memorial of those who have fallen in the war and a thankoffering for those who have been spared and for peace, it is proposed to erect a permanent church on the site of the temporary church of St. Thomas in Seaview Road, Liscard.

IT is suggested by Sir Edward Carson, K.C., that the war memorial for Belfast should take the form of the building of another section of the Cathedral. For this object Sir Thomas and Lady Dixon have given the sum of £1,000 "as a great encouragement to the project."

WITH regard to a scheme for bakehouse, soup kitchen, and furnace accommodation attached to the public hall at Bere Alston, Mr. J. Sherrall stated at a meeting of Tavistock Rural Council that a committee had been appointed and the scheme had been submitted to the Earl of Mount Edgcumbe, who had generously agreed to defray two-thirds of the cost. The committee were dealing with the matter.

THE Bishops' Commission having decided that two new churches are necessary in Lancaster, and that one now in existence should be removed to the Bower Lane district, the Vicar of Lancaster, the Rev. J. U. N. Bardsley, announced to a meeting of parish church officers that he and Mrs. Bardsley would, as a thank offering for peace, be responsible for the erection of a new church in the Bulk district, if the congregation of the parish church would take in hand the erection of a new church on a site at the Westfield Settlement for Disabled Soldiers and Sailors for St. George's district. The church officers cordially accepted the "challenge" on behalf of the congregation, and the schemes will be pushed forward as soon as possible.

THE "Western Morning News," in an article, states that "Plymouth Town Council undoubtedly acted wisely in approving the purchase by the Housing Committee of the land at St. Budeaux offered by Lord St. Levan at a price which compares not unfavourably with what has been paid for land for the same purpose at Birmingham and other great cities in the Midlands and North. The price paid sets up a new standard for Plymouth which we hope will be extensively followed, for the exorbitantly high prices hitherto demanded for land have been one of the main obstacles to the extension of the town on lines of beauty and convenience. The manner in which the land so acquired shall be laid out is a matter for after-consideration, and the Council would probably not be unwise in inviting the Civic Survey Committee, which includes the leading architects of the town, to make suggestions in regard to it. It will be necessary to take measures to prevent if possible the danger pointed out by more than one member of the Council that the houses might not be inhabited by the class of people for whom they are to be built. That, however, is a point which concerns the future rather than the present. We hope the land that has been so liberally disposed of by Lord St. Levan will be laid out and built upon so as to serve as a model of what small cottage homes should be, with every convenience for the health and moral welfare of the families by which they will be inhabited."

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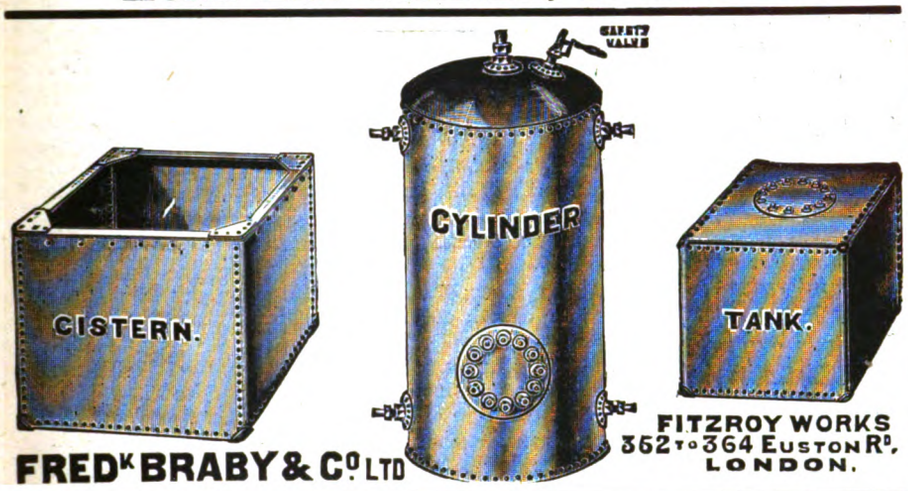
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SUPPLEMENT—PAGE II

THE

Architect and Contract Reporter.

FRIDAY, NOVEMBER 29, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

COMPETITIONS OPEN.

MERTHYR TYDFIL.—Dec. 31.—For completion of fourteen houses (exclusive of street works) at Gellifaelog, Penydarren, Merthyr Tydfil, for the Corporation. Borough architect, Merthyr Tydfil.

SUNDERLAND.—Dec. 5.—For painting Colliery, Barnes, and Diamond Hall schools, for the Corporation. Mr. J. W. Moncur, borough surveyor, Town Hall.

TENDERS.

BOSTON (LINCS.).

For erection of bridge over Maryland Drain, Amber Hill, for the Boston Rural District Council.

J. W. PINDER (*accepted*)	£650 0 0

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THE suggestion for a war memorial for Barnsley takes the form of a mining and technical school.

THE Unitarians of Sheffield have adopted a scheme to erect at Bradwell a convalescent home for soldiers and sailors.

MR. JOHN KOHLER, retired architect and surveyor, who was residing at Bexhill, and who died recently, left £10,165.

THE Bacup Town Council have expressed their willingness to erect 100 houses for the working classes as soon as possible.

SIR ASTON WEBB, R.A., has designed an oak lectern for the Norman church of St. Bartholomew the Great, West Smithfield.

MR. A. B. BROWN, of Lennox House, Norfolk Street, Strand, has been appointed diocesan surveyor for the Oxford Diocese (Archdeaconry of Buckingham).

SAPPER FRANK PEARCE, a member of the firm of George Pearce & Sons, builders, Mill Street, Maidstone, was killed just before the time fixed for the armistice.

A FREEHOLD building site at the corner of Leadenhall Street and Bishopsgate has been sold at the rate of £40 a foot, a record price for land in that part of the City.

AT Teddington, Middlesex, it is proposed to erect a new cottage hospital for that district and the adjoining parish of Hampton Wick, as a permanent local war memorial.

MR. WALTER WILLIAM SMITH, builder, late of Upper Stone Street, Maidstone, died on Monday last. After the war broke out Mr. Smith disposed of his business and took an appointment with Messrs. Vickers as draughtsman.

THE Chester Rural District Council, at a special meeting on Saturday, Lieutenant-Colonel T. Thorncroft Vernon in the chair, decided to put into operation a scheme for the building of 150 cottages in their area.

A MEMORIAL service for the members of the architectural profession who have fallen in the war will be held at St. George's, Hanover Square, at 12.30 P.M. on Wednesday, December 4. The service will be conducted by the Rector, the Rev. F. N. Thicknesse.

THE steps to be taken to carry into effect the plans submitted by Mr. A. J. Thomas, the hon. architect, for laying out the site set apart at St. Pancras Cemetery for the burial of members of the Forces who have died as the result of service during the war have been considered by the Baths and Cemetery Committee of the local borough council. The Committee has ascertained that this memorial will cost £2,000, and as they are of opinion that this should be defrayed by public subscriptions, they recommend that the mayor be authorised to issue a public appeal.

OUR contemporary, the "Evening Standard," states that, in their opinion, "In the carrying out of the Government's housing programme it will be necessary to overhaul and revise the great body of municipal law known as 'building by-laws.' The use of substitutes for material hitherto obligatory by by-laws will have, doubtless, in certain instances, to be permitted. The cessation of hostilities will release a great volume of human ingenuity which has been employed in the invention of the instruments and munitions of war. It will be nationally desirable if this inventiveness can be turned to account in devising new materials and new methods in building. The country will probably be divided into districts, under commissioners, for the purpose of realising the national housing programme."

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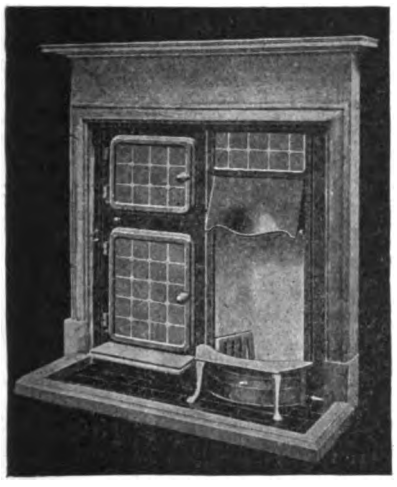
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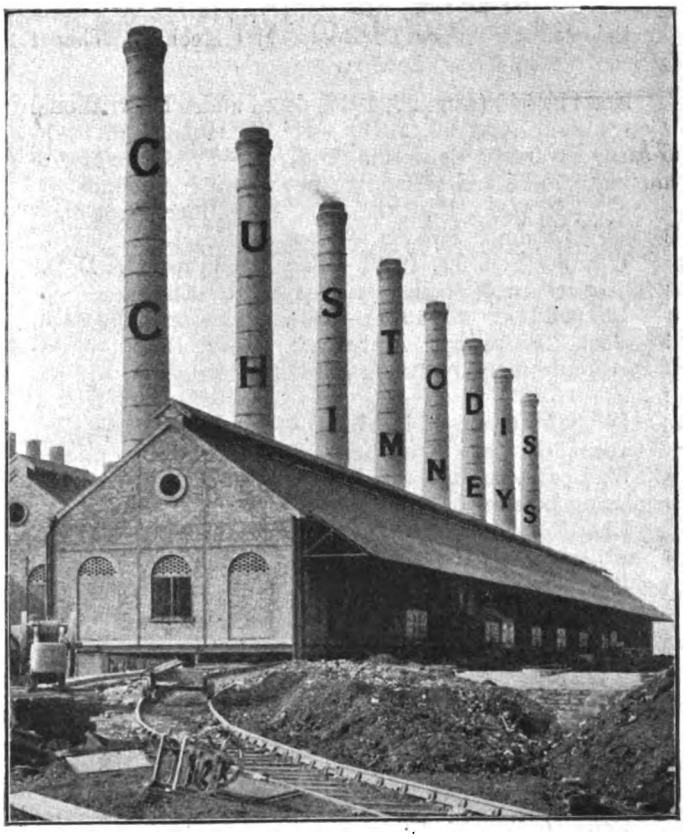
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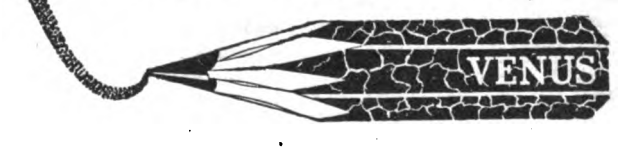
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PATENT SPECIFICATIONS.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 110,540 (Aug. 27, 1917, dated under International Convention Sept. 26, 1916).—F. W. Huber and F. F. Reath, Riverside, California, U.S.A.).—Processes of producing cement and recovering potassium compounds.

113,268 (Dec. 19, 1917).—K. P. Billner, Drottningtorget 1, Malmo, Sweden.—Floor construction.

114,420 (Feb. 11, 1918).—Soc. des Vitrages A.M.L., 278 Boulevard Raspail, Paris.—Glazed roofings.

120,052 (Oct. 23, 1917).—Edwin Glossop and Joseph Sherlock, Ridgeway, Ambergate, near Derby.—Continuous kiln for the burning of bricks, terracotta, and the like.

120,064 (Sept. 24, 1917).—Lawrence Bagguley, 1 Crocus Cottages, Goodhead Street, Nottingham, and C. W. Lacey, 18 Rylands Road, Beeston, Notts.—Electric lamp holders or attachments.

120,070 (Oct. 15, 1917).—A. J. Bonnella, 58-60 Mortimer Street, W. 1.—Electric lamp fittings.

120,095 (Oct. 27, 1917).—Edward Smulski, Hastings-on-the-Hudson, Westchester, N.Y., U.S.A.—Concrete reinforcing means.

120,101 (Oct. 30, 1917).—A. E. Pessi, 2 Via Stazione, Cremona, Italy.—Reinforced-concrete building units.

120,108 (Nov. 7, 1917).—W. H. Bennett, 12 Osborne Road, Southampton.—Electric heating and cooking apparatus.

120,110 (Nov. 7, 1917).—Louis Christin, 2 rue de la Muse, Geneva, Switzerland, builders' merchant.—Construction of concrete floors.

120,073 (Oct. 17, 1917).—W. B. MacLusky, Halifax Corporation Gas Works, Mulcture Hall Road, Halifax.—Gas, electric, and like fires.

120,080 (Oct. 23, 1917).—Ronald Lister, 88 Sandy Lane, Chorlton-cum-Hardy.—Hand truck or trolley.

120,118 (Nov. 14, 1917).—Donald Moir and Hugh Buchanan, both of the Consolidated Waterworks Company of Rosario, Ltd., Rosario de Santa Fe, Argentine.—Concrete or like pipes and means for joining them together.

120,160 (Feb. 15, 1918).—Niels Hansen, 57 Lyngby, Hovegade, Lyngby, Denmark, and Frederick Christensen, 4 St. Marcus Alle, Copenhagen, Denmark.—Process for producing sheets, consisting chiefly of wood for the covering of floors, walls, furniture, and other articles or surfaces.

120,164 (March 19, 1918).—A. W. C. Schelff, Benhurst, 30 Lambert Road, Brixton Hill, S.W. 2.—Reinforced concrete construction.

120,173 (May 2, 1918).—Percy Powley, 12 Carlton Road, Leytonstone, Essex.—Plugs or slabs for building or other purposes.

120,180 (June 15, 1918).—J. E. Jones, 36 Doctors' Piece, Willenhall, Stafford.—Chain padlocks.

120,182 (June 20, 1918).—Harold Washington and G. E. Washington, 1548 Ashton Old Road, Manchester. Audible alarm or indication apparatus.

Any of the above specifications may be obtained from J. D. Roots.

To the members of the Edinburgh Architectural Association, Mr. John Ritchie, M.A., LL.B., Perth, gave a lecture in the College of Arts last week on "Romanesque Churches in Burgundy." Mr. T. P. Marwick, A.R.I.B.A., president, occupied the chair. The lecturer dealt with the great variety to be found in the Romanesque churches of France as one passed from province to province, thus giving the study of the buildings of the period a great interest. He explained the causes which led to these differences, and in particular pointed out the characteristics of the churches of Burgundy built in the eleventh and twelfth centuries. The lecture concluded with a fine series of slides illustrating the famous Abbey Church of Vezelay. The lecturer urged that as our relations with France are likely to be closer than ever in the future, more Scotsmen, and particularly those interested in architecture and architectural photography, should visit the out-of-the-way districts of that country.

THE SOCIETY OF ARCHITECTS.

By F. Lawrance.

(*Continued from page* 264.)

Notes on Re-painting Previously Painted Work.

Work should be first examined to ascertain whether the old paint will make a worthy foundation for the new.

(*a*) If the old work is badly cracked or blistered the paint should be removed. This can be accomplished in three ways. 1. Burning off. 2. Caustic paint remover. 3. Spirit paint remover.

(*e*) Whenever paint is removed it is advisable to use a greater proportion of turps in the priming coat than for new work of the same kind.

(*f*) Attempts to fill up badly cracked work with filling are not always satisfactory, as the cause of the cracking is not removed, and the cracks will often develop further after repainting.

(*g*) Attempts to scrape off blisters, fill up and repaint, are rarely successful, as the new paint often causes the old (which has not properly adhered to the surface) to blister up in fresh places.

(*h*) Where work is sound or only slightly cracked on surface, it should be first washed and then rubbed down well with pumice stone and water.

(*i*) If work after preparation presents a tacky surface, a thin coat of flatting will render a perfectly hard ground.

(*j*) If knots show through the work, the paint should be scraped away to the wood in these places, the knots re-coated with patent knotting and the surface filled up level again.

(*k*) Painting should always precede stopping and holes should be well painted.

(*l*) Paint thinned with half oil and half turps would be suitable for average surfaces after preparation.

General Rules for the Sequence of Coats in Painting.

(1) A quick, hard drying paint or varnish (or knoting) should never be applied over a very oily one, because the hard film of paint is not sufficiently elastic to give to the movements of the oily undercoat (caused by the expansion and contraction of the latter). Oily coats over hard ones are not open to the same objection.

The priming coat over an absorbent surface need not be regarded as a very elastic one, as it enters the surface, which holds it firmly.

(2) Size should not be applied over oil paint, not only for reasons stated above, but also because size has a contractile tendency and cracks itself. Being strongly adhesive it will also tear the undercoats apart to conform to its own movements. For this reason, care should be taken when sizing walls or hanging paper not to allow any size or paste to become permanently attached to any of the painted work. Unless washed off again, it is likely to crack the painted work through to the wood.

(3) Paints containing an excess of terebine or goldsize must be looked on as having contractile qualities, and may crack in themselves, but are certain to do so if applied over a very oily paint.

(4) One coat of paint should never be covered with another coat of paint or varnish until thoroughly hard, because the top coat will prevent further hardening of the undercoat, which will consequently remain too elastic for agreement with the final coat, hardened by its permanent contact with the air; cracking will result.

(5) Paint should be brushed out well and evenly to a thin film, otherwise the surface may become dry and exclude the air from the paint just under the dry film, with the result that the paint may become permanently tacky. This may occur in patches if the paint is not applied evenly.

(6) Each coat of paint should be lightly glass-papered to remove specks of dust, &c., before applying the next coat.

(7) The respective coats of paint should have an excess of oil and turps alternately (but not carried to extremes). This facilitates application, and the coats are made sufficiently equal in elasticity to prevent cracking (but see "Flatting" below).

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(8) Some painters employ the method of applying all the intermediate coats from one mixing, made from about half oil and half turps, but such coats are not so cohesive as the corresponding coats of the foregoing method (7), and the application is more difficult.

NOTES ON PAINT FINISHES.

(1) *Flatting.*—The methods of preparing for and applying flatting do not appear to be consistent with the rule that hard coats should never be applied over oily ones, but when the following points are considered it will be seen that fresh principles are involved.

(2) *Glossy Oil Finish.*—This must be well brushed out and should be mixed round enough to remain firm when spread. If applied too heavily it is apt to dry too quickly on the surface, resulting in permanent tackiness or cracking.

(3) *Enamel Paint.*—(*a*) For mixing enamel paints, pigments of strong staining power and high purity should be selected, and only sufficient added to varnish to obtain sufficient opacity.

(4) *Enamels and Varnishes.*—These are obtained by the painter ready prepared. Cleanliness in all stages of preparation and application is necessary for good work. The varnish must be spread evenly and not too sparingly. It can be crossed to facilitate spreading, but the work should be left to flow out as soon as possible. Care must be taken to avoid dust and draughts.

(5) *Flat Enamels* should be applied over a flat ground (unlike flatting paint). Each portion should be cut in cleanly, to prevent the brush going over partially dried enamel a second time (along edges, &c.), and causing flashing (glossy patches).

These extracts give the main principles that have to be complied with for successful painting.

We can now examine the materials at present obtainable in order to ascertain how far they are capable of fulfilling their functions as paint ingredients. *Pigments*: Lead hydro-carbonate, lead sulphate, zinc oxide, zinc sulphide, chemical compounds of these or any of them, with reducers added, are the only white pigments that could be considered from a practical point of view, having regard to opacity and other characteristics necessary for white oil paints; and in view of the absence of lead and the shortage of zinc, the pigments that answer the necessary qualifications with the least expenditure of metal will probably come to the front.

At the present time zinc pigments are much more readily obtained than lead, and it is quite possible to make highly satisfactory paints from zinc by proper selection and blending of the various forms of zinc pigments procurable. It should be noted, however, that while certain zinc sulphide pigments give excellent results on inside work if properly blended, they are quite unsuitable for exterior painting, and when specifying finishing coats for such work, architects would do well to state clearly that these paints must be free from zinc sulphide.

Painters are less decided as regards zinc for outside use, although certain grades of this pigment have been used in America for years with perfect satisfaction, but this hesitation is due to the fact that many unfortunate experiences have occurred in the past, either owing to improper mixing, due to doubtful acquaintance with the materials, or from the wrong selection of zinc pigments. Experience with R.M. outside paints of more recent type does not go far enough at present for the house painter to express a definite opinion. These paints are being made on sound lines, however, and are in fact modified forms of the paints which have had such a wide application in America and elsewhere. The modifications referred to are of course due to the limitations of the use of linseed oil, to which I shall refer later, but the point I wish to make at the moment is that the use of a properly selected zinc pigment for outside painting has long passed the experimental stage, and the pigment cannot be looked on as a new material.

Also, the cost of white lead always appeared to compare favourably with this class of zinc pigment, although a careful examination of the relative spreading capacities of the two pigments does not support this apparent comparison.

The technique of paint-mixing entered into the question, and the adjustments necessary for zinc pigments as against lead pigments was not sufficiently understood. The present situation has caused a revival of interest in these comparisons, which will, I think, lead to a much better understanding of white paints and a more extensive use for zinc whites.

Oils.—Whilst linseed oil is difficult to obtain and its high value perhaps never realised as much as it is now, the materials extracted from this oil for war purposes leave a balance of material which is obtainable in fair quantities, and, with proper manipulation, can be used for white paints if mixed with other vegetable oils, which, though expensive, are not difficult to obtain. The product is a paint oil which acts similarly to linseed oil on exposure, i.e. it absorbs oxygen, thus changing physically into a tenacious film.

Many oil substitutes are offered on the market, but most of these are either made from mineral oils or from rosin and spirit, or from mixtures of these ingredients. The mineral oils are open to the objection that they do not absorb oxygen, and, therefore, do not dry, and no amount of driers will make them do so. When mixed with rosin, these oils appear to dry, but invariably resoften, the oil sweating out from the rosin, leaving a sticky or greasy film, which it is impossible to paint over; moreover, they possess none of that tenacity and adhesiveness which are essential characteristics. Rosin and spirit is an equally unsatisfactory mixture: the spirit evaporates, leaving a film of rosin, possessing no elasticity, and, therefore, utterly incapable of imparting any durable quality to the paint.

(*To be concluded.*)

THE Lancashire Higher Education Committee have approved the proposal of the governors of the Prescot Grammar School to purchase a site for a new school and playing field from Lord Derby. The site is on the south side of St. Helens Road, just beyond the boundary of the Prescot urban district. The estimated cost, including fencing, sewering, paving, &c., is £1,309 10*s*.

A MEETING is being held this afternoon in the Pillar Hall, Cannon Street Station Hotel, at 4 P.M., of the Property Owners' Protection Association; the chair will be taken by Mr. Edwin Evans, J.P., L.C.C., and an address will be given by Mr. M. Cheverton Brown, C.C., past president of the National Federation of Property Owners and Ratepayers, entitled "A Great Union of Owners: How to Protect our Interests and Help each Other." The meeting is an open one on presentation of card, and any question asked will be gladly replied to.

MESSRS. ROBERTS, ADLARD & Co., roofing contractors, 47 Queen Victoria Street and Bermondsey, S.E., send us a very useful report on roofing materials, which is opportune in view of future developments in the building trade. We get in it a statement of the quantity and weights of various roofing materials per house based on an average size of house, the amount of slates available in various districts and their average cost per square fixed. Similar data is given with regard to tiles, patent pantiles, asbestos slates, and other roofing materials. The report is illustrated by a map showing the slate and tile producing areas, and the report, which is not of the nature of a trade catalogue but, as it is termed, a report on an important technical matter will be widely referred to and utilised. Messrs. Roberts, Adlard are too well known to the building world to need recommendation.

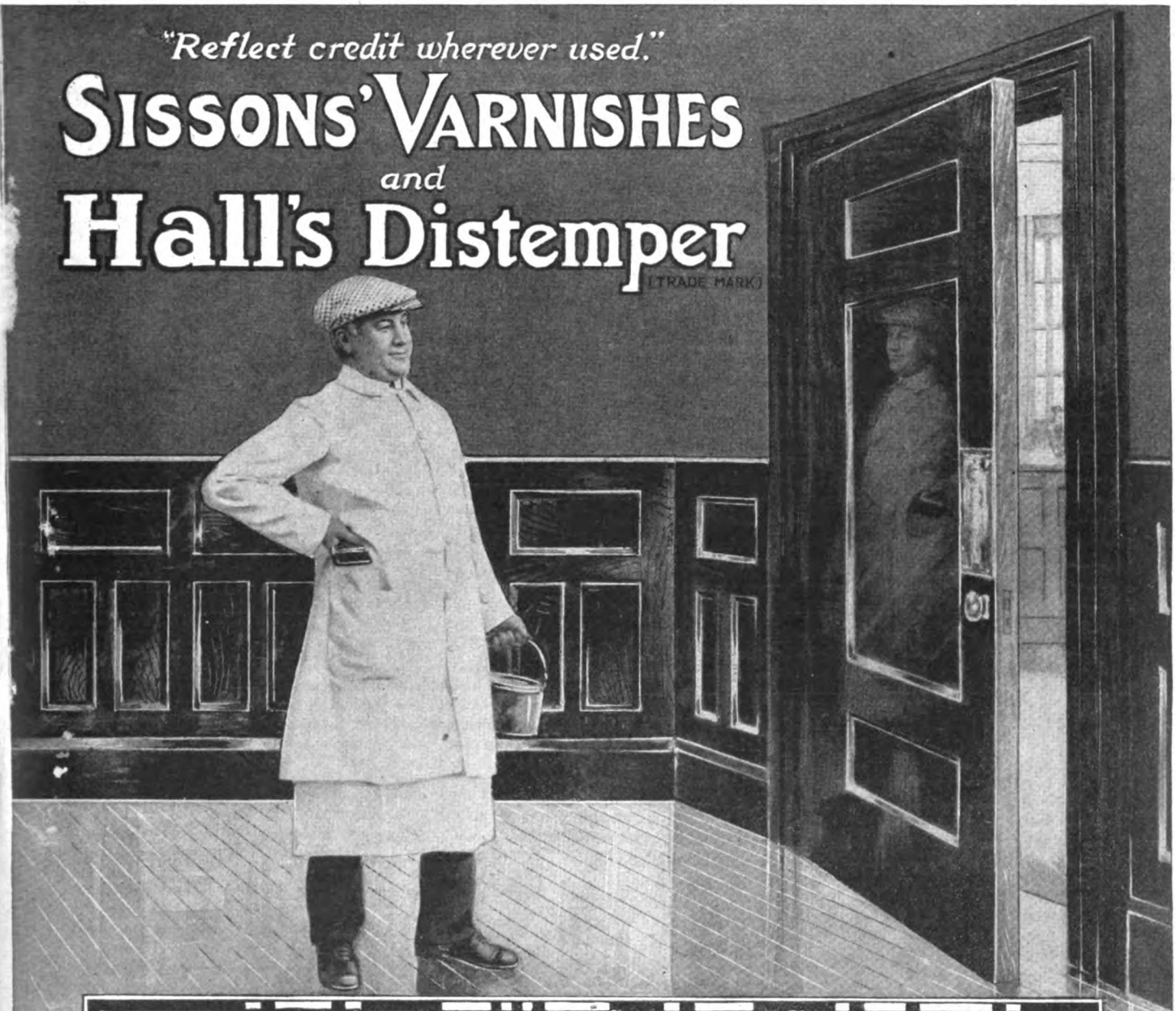
MESSRS. TUKE & BELL, LTD., of the Carlton Engineering Works, High Road, Tottenham, N. 17, have issued a pamphlet explanatory of their system of water softening, sewage purification, &c. In their opening remarks they state that during the past four years, owing to the demands of the Government for sewage and water apparatus for both Army and munition purposes, they have developed a manufacturing organisation complete with wood-working shops, forges, sheet-metal shops, machine and fitting shops, which has greatly increased the efficiency of their technical staff. Their catalogue is issued without prices owing to the difficulties of fixing costs of material and wages, but a member of the staff will be prepared to submit schemes and cost for any sewage or water purification work. Their catalogue, to be obtained on application, is well and clearly printed and illustrated, giving particulars of their system.

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THE
Architect and Contract Reporter.
FRIDAY, DECEMBER 6, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

ENEMY ADVERTISING.

This Journal is conducted in the interests of British industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

CONTRACTS OPEN.

BATLEY.—Dec. 9.—For works in alterations to Croft House, Soothill, Batley. Messrs. Kirk, Sons & Ridgeway, F.R.I.B.A., architects, Dewsbury.

BLAENAVON.—For erection of stairways to cinema house and alterations and additions to workmen's hall, Blaenavon. Messrs. Fisher & Sons, architects, Pontypool.

LEEDS.—Dec. 7.—For builders' work and structural steelwork required in erection of extensions to superstructure of boiler house, switch rooms, and circulating pump house at Leeds electricity works, Whitehall Road, Leeds. Mr. G. W. Atkinson, architect, Leeds.

MERTHYR TYDFIL.—Dec. 31.—For completion of fourteen houses (exclusive of street works) at Gellifaelog, Penydarren, Merthyr Tydfil, for the Corporation. Borough architect, Merthyr Tydfil.

TENDERS.

DURHAM.

For washing down walls and ceilings at Easington Lane and Eppleton schools, for the Durham County Education Committee.

S. H. ROBINSON, Houghton-le-Spring (*recommended*) £77 10 0

EAST HAM.

For repairing motor fire engine, for the East Ham Town Council.

SHREWSBURY & CHALLINER TYRE CO., LTD. (*recommended*) £49 1 6

For supply of timber, for the East Ham Town Council.

G. E. GRAY, LTD. (*recommended*) . . £201 3 0

LONDON.

For alterations and repairs to Barton House, Albion Road, for Stoke Newington Borough Council.

F. PARSONS & SON (*accepted*) . . . £97 0 0

For repairing and making good chairs and office stools in the town hall, for the Lewisham Borough Council.

W. PEPPERCORN (*recommended*) . . . £68 9 0

Trade Notes.

WE have received a letter from the well-known firm of Thomas Faldo & Co., Ltd., asphalte manufacturers and contractors, pointing out the importance of keeping the trade in British hands and discouraging the attempt which will be made to once more flood our markets with products which are of German origin and manufacture. Such products are often of synthetic composition, and while good synthetic asphalte which is manufactured here is perfectly reliable and satisfactory, the use of poor synthetic products of foreign origin has frequently brought discredit on all concerned. The architect and contractor is not in a position to apply the necessary complicated tests which can alone determine a difficult matter, and their greatest safeguard will always be the use of materials the name of whose makers may be regarded as a certificate of quality. It must also be remembered that German economic conditions after the war may lead to a determined attempt to penetrate our markets through those of other countries, and additional vigilance will be required to guard against it.

WE have received a linen mounted table giving data of the thickness of concrete and sizes of the fabric to be used for various classes of floors over various spans when reinforced with B.R.C. fabric, which is manufactured by the British Reinforced Concrete Engineering Co., whose head offices are at 1 Dickinson Street, Manchester, and whose London office is 36 Lime Street. The wide use and popularity of the material is too well known to need emphasising; it has the great advantage of being a scientific and convenient form of reinforcement which can be utilised without the necessity of employing skilled mechanics. The table published is very well arranged and supplies in a convenient form data which is the result of carefully conducted tests and calculations, and is therefore to be absolutely relied upon. The tables apply to roofs, offices and dwellings, warehouses, schools, shops and public buildings, ball rooms and drill halls, heavy warehouses and machinery, and thus cover practically every requirement. Special figures are given in every case to cover the requirements of such local authorities as do not discriminate between drawn-steel wire and rolled-steel rods (though the former are 50 per cent. stronger). We have little doubt that during the period of industrial stress which we are now entering upon the B.R.C. fabric will be used more widely than ever, as its use saves time and gives a most satisfactory result.

MR. WILLIAM TAYLOR, of Paisley, late of Castlehead, builder, left estate valued £5,217.

MR. F. J. DALBY, head of the firm of Dalby & Co., builders and timber merchants, of Banbury, died last week from pneumonia.

AT the last meeting of the Tredegar Council it was reported that Mr. A. F. Webb, the architect for the Council's housing scheme, had his sketch plan for the houses prepared. The proposal is for 500 houses.

MAJOR B. J. RYAN, Royal Engineers, a student of the Society of Architects, who received the Military Cross some little time ago, has recently been appointed a Cavaliere of the Crown of Italy for his services on the Italian Front.

THE Freedom of the Paviors' Company has been conferred on Brigadier-General H. P. Maybury, C.B., in recognition of his war services as Director of Roads in France. He was formerly surveyor to the Malvern Urban District Council.

MR. W. F. ANDREWS, thrice Mayor of Hertford, who has just died, aged seventy-seven years, was known as an archæologist. He was a large owner of property in Hertfordshire, and with his brother presented a museum to the county town.

THE Military Cross has been awarded to Second-Lieutenant Frank Pride, R.E., son of Mr. A. J. Pride, 2 Oakwood Terrace, Dundee. Prior to joining up in 1916 Lieutenant Pride was engaged in the offices of Messrs. Leslie Ower & Allan, architects, Dundee.

WE have received a copy of "The Pottery and Glass Record," edited by Mr. Arthur Finch, published monthly, price 1*s*. The journal has been enlarged in size and is well printed and illustrated. The last month's contains an interesting article by Mrs. Willoughby Hodgson, on "Old China," suitable for reproduction, with some excellent illustrations.

THE last of the first series of lectures arranged by the Industrial Reconstruction Council will be given in the Saddlers' Hall, Cheapside, E.C. 2, on Wednesday, December 11, at 4.30, Lord Salisbury presiding, when a lecture on "Science and Industry" will be delivered by Sir William S. McCormick, LL.D., of the Department of Industrial and Scientific Research. Applications for tickets should be made to the secretary, I.R.C., 2 and 4 Tudor Street, E.C. 4.

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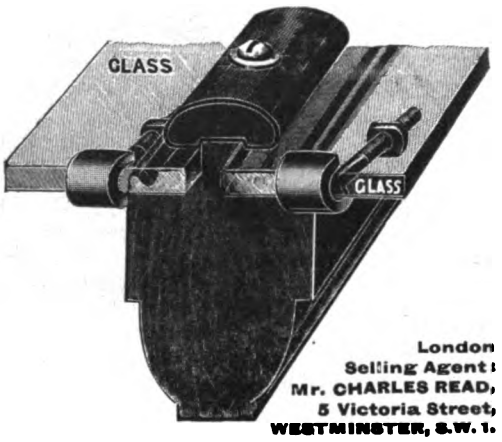
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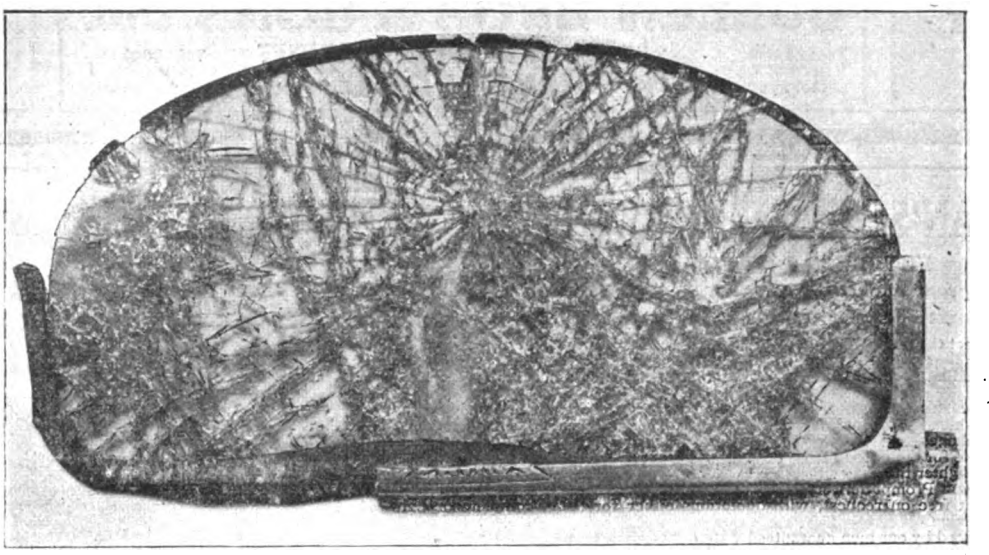
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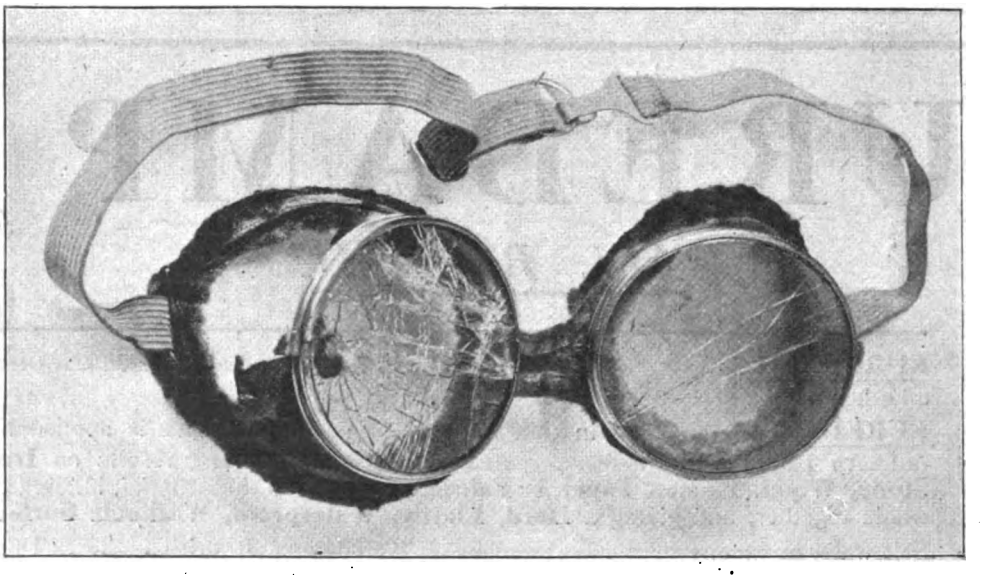
Triplex Safety Glass.

We recently gave an account of Triplex Safety Glass, and have pleasure in giving two illustrations showing its value.

A *McCudden Relic.*

Triplex Screen taken from the machine in which the late Major McCudden, V.C., D.S.O., M.C., met his death. It will be noted the whole of the Triplex Glass is intact, while half the metal frame has been broken away.





July 14, 1915.

Sirs,—I enclose a pair of Triplex goggles I had some time ago. You will observe that although the glass is all there it is badly cracked, and the frame is severely burnt.

My aeroplane was set on fire by a German shell at a considerable height, and I think I would have lost my sight, and consequently my life, if I had not been wearing your Triplex goggles. As it was I was able to effect a landing in spite of the flames. The machine was completely destroyed in a very short time.

Please send me another pair of goggles.—Yours faithfully, Lieut. R.F.C.

Both of the above reports and illustrations bear testimony to the value of the new invention.

Patent Specifications.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 118,850 (Sept, 6, 1918—Dated under International Convention, April 5, 1917).—P. A. Gandillon, 2 rue Sainte Catherine, Tarbes, Hautes Pyrenees. Water closets.

120,290 (Dec. 10, 1917).—Lawrence Ennis, Genesee Lodge, Cambridge Road, Linthorpe, York, and Alexander Jack, Auckendrane, Cameron Street, Motherwell, Scotland. Overhead travelling cranes.

120,293 (Dec. 13, 1917).—G. H. Uecke, 1011 Washington Avenue, South Minneapolis, Minn., U.S.A. Processes for softening water, and 120,293 (Dec. 13, 1917). Apparatus for softening water.

120,245 (Oct. 29, 1917).—J. J. Kermode, 35 The Temple, Dale Street, Liverpool. Cooking ranges and the like adapted to burn heavy oils as fuel.

120,315 (Feb. 7, 1918).—F. S. Pulsford, Kenmore, Sandown Road, Leicester. Steam and water heating apparatus for cooking and like purposes.

120,318 (Feb. 9, 1918).—C. W. Thomas, Clifton House, Old Swinford, near Stourbridge, Worcester. Apparatus for casting clay ware.

Any of the above specifications may be obtained from J. D. Roots.

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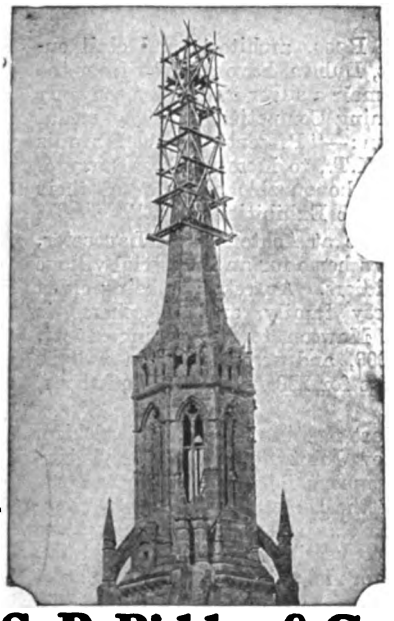
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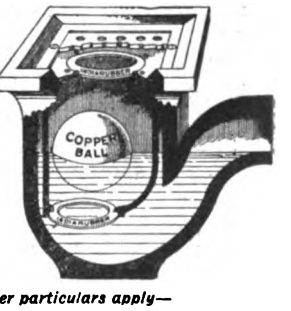
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General.

THE war memorial at Bakewell will be a cottage hospital.

THE institute at Canton which was recently destroyed by fire is to be rebuilt as a war memorial.

THE Cavan County Council (Ireland) is preparing a scheme for the rebuilding of Ballyconnell Court House.

A NEW building to replace the flour mills which were recently destroyed by fire at Clare, Ireland, will be erected on a site near the Great Southern and Western Railway.

THE Roman Catholics of Tunstall are holding a three-days' bazaar to provide funds for the erection of a new church.

PLANS are being prepared at Brighton for the laying out of estates on the outskirts of the town for working-class dwellings.

THE Rawmarsh Urban District Council have approved a scheme, submitted by the Housing Committee, providing for the erection of 300 working-class houses.

THE Morecambe Town Council have decided to obtain competitive designs for a new town hall to the built on the Poulton Hall estate.

THE Dudley Housing Committee have decided to recommend the Town Council that a scheme be prepared for the erection of 120 workmen's dwellings at Red Hill.

THE Parish Council have advised the Hambledon Rural District Council that twelve cottages will need building as soon as materials and labour are available.

THE Stirling Town Council have acquired the old building in Broad Street and will proceed to consider a scheme for erecting buildings on the site.

PLANS for twenty houses to be erected in Acklam Road opposite the cemetery have been approved by the Plans Committee of the Middlesbrough Corporation.

THE Town-Planning Institute inform us that the meeting fixed for December 6 is postponed until January 17, and that fixed for February 7 to February 14 next.

THE vacant portion of the workhouse at Ballymoney, Ireland, has been sold to Messrs. Douglas & Green, of Belfast, for the purpose of conversion into an embroidery factory.

THE Prestatyn Council have decided that one of the first things to be taken in hand will be the new drainage scheme, which has already been prepared. It was also decided to proceed with a town-planning and artisan-dwellings scheme.

IT has been proposed that the Market Harborough war memorial should take the form of the erection of a free library and reading room to be erected in Church Square. The approximate cost of the scheme is £12,000.

THE death is announced of Mr. R. B. Starkey, London representative of the Ellistown Collieries, Leicester, and formerly in partnership with Mr. Fergusson, of the firm of Fergusson & Starkey, builders' merchants, Leicester.

THE Retford Town Council have approved of seven sites, varying from six to thirteen acres in extent, for town planning and housing purposes, and have decided to proceed with the erection of 150 houses, and to lay out land on other sites.

AT a large and influential meeting in Tranent it was agreed to form a committee to work conjointly with the Town Council, with the object of raising at least £1,000, to give the men of the district a welcome home, and of erecting a Young Men's Institute as a memorial to the fallen.

AT the last meeting of the Guildford Town Council it was decided to proceed forthwith with the preparation of a scheme to erect 300 houses for the working classes, and land is to be acquired for this purpose of 30 acres, 22 acres of which are owned by the Earl of Onslow.

THE Doncaster Town Council have under consideration a scheme for the erection of about 380 houses on the Carr House estate. The Corporation also propose to erect other houses on Warmsworth Road, and on a site between Woodfield Lane and Common Lane, Balby.

THE Winterton Urban District Council have decided to prepare plans for a housing scheme in the urban district, suitable for the working classes, and to erect twenty houses, with a further ten if found necessary, on the terms stated in the Local Government Board's circular letter.

THE City Council of Ripon at their monthly meeting went into committee to consider the housing scheme and the plans prepared by the surveyor for the erection of 130 houses on the Aismunderby Estate, purchased from the Ecclesiastical Commissioners for £1,500, and containing 13 acres. The Council approved the scheme and ordered it to be forwarded to the Local Government Board for sanction.

MR. A. V. GUY, secretary of the Nottingham and district branch of the National Federation of Building Trade Operatives, has issued notices to the effect that from last week the following are fixed wages:—Plumbers, 1s. 4½d. per hour; stonemasons, bricklayers, joiners, plasterers, slaters, and wood-working machinists, 1s. 4d.; painters, 1s. 2½d.; all labourers, 1s. 1½d. These are minimum rates plus the war bonus.

THE Torquay Advisory Committee have selected representatives to sit on the Divisional Council. The chairman explained it was their intention to notify the building trade that they should at once send in the names of all key men whom they are desirous of having returned to their employment. It will be the duty of the Building Trades' Sub-Committee to select names sent in for release, giving preference to men who have served longest in the Forces and to married men over single.

THE Belfast Corporation propose to lay a system of mains throughout the city in connection with the new harbour station, to provide a power supply suitable for the requirements of mills and factories and other large or small power users. The area in which there is the greatest demand will first be provided for. All consumers who contemplate adopting electric power, either in large or small quantities, within the next two years, are requested to furnish particulars of their estimated requirements to the city electrical engineer as soon as possible.

MESSRS. KAYE-PARRY & ROSS, architects and civil engineers, of 48 Kildare Street, Dublin, have received from the Marquis of Aberdeen and Temair a silver medal as a souvenir of the Dublin "Town-Planning Competition." The medal bears the following inscription:—"Presented by the Marquis of Aberdeen and Temair, K.T., to Messrs. Kaye-Parry & Ross in commemoration of honourable mention of their designs for 'New Dublin' Civic Exhibition, 1914."

A MEETING of 3,000 people at Ashton Hall, Lancaster, has unanimously approved a scheme for an industrial village at Westfield for disabled soldiers. An estate is being given for this object by the Storey family, and the scheme is designed by Mr. Thomas H. Mawson, town-planning expert. The estimated cost is £80,000, and accommodation will be provided in artistic dwellings for 200 men, with workshops, recreation grounds, &c.

IT was reported at the last meeting of the Staffordshire, Wolverhampton, and Dudley Joint Committee for Tuberculosis that the Local Government Board had approved the plans for the adaptation of the Limes, Himley, as a sanatorium. Tenders are to be obtained for carrying out the work. The scheme for the conversion of Edge View Hotel, Kenver, has also been approved by the Local Government Board.

SIR WILLIAM PICKLES HARTLEY, a native of Colne, Lancs., whose benefactions to the town have been numerous, has offered to revive the scheme suspended at the outbreak of war to erect as a war memorial in Colne a general hospital at a probable cost of £30,000. This institution will supersede the present cottage hospital, also a gift of Sir William, which will be used as a convalescent home.

THE report of the Liverpool Housing Committee for 1917 refers to the stoppage of its operations owing to the war, but expresses the hope that immediately after peace is declared the work will be resumed. There were still 2,585 back-to-back houses to be dealt with in the city, and approximately 4,000 which are in such an extremely unsatisfactory condition as to call for immediate treatment. Owing to the deficiency of working-class houses the need for new dwellings was very urgent, and it was estimated that the average number required to be built to provide for the increase of the population was at least 1,000 per annum. The Committee had 2,894 tenements under their control, of which 2,300 were absolutely restricted for the dispossessed.

AT a meeting of the Witham Urban Council, in the absence of Mr. Hutley through illness, the Hon. C. H. Strutt presided. The chairman spoke of the desire of everyone that the great services and noble sacrifice of those who had fought and died for England should be worthily commemorated, and he urged that any memorial should bear their names. Several of those present offered suggestions as to the form the memorial should take. These included: An obelisk with the names of the fallen engraved on it; a church in the new cemetery, with a tablet to every man killed and reported missing; a wayside memorial; a granite monument bearing the names of the heroes and surmounted by a gun captured by the British and a miniature statue of "Liberty"; and a cottage hospital. Eventually it was resolved, on the motion of the chairman, seconded by the Rev. J. G. Rees, that there should be a public memorial, and the committee to whom the various suggestions were referred were asked to give due consideration to the possibility of erecting a wayside memorial as part of the scheme.

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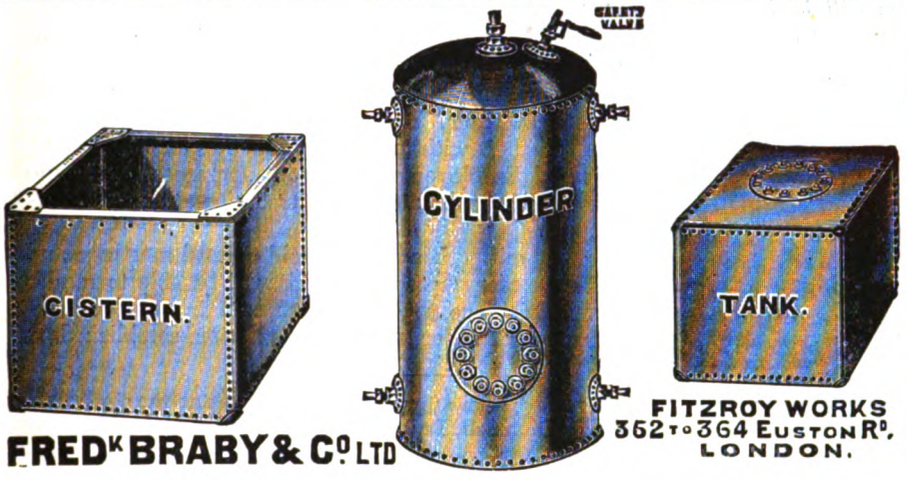
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SUPPLEMENT—PAGE II

THE

Architect and Contract Reporter.

FRIDAY, DECEMBER 13, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

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KEIGHLEY.—Dec. 20.—For work (except masons') required in reinstatement after fire and the erection of an additional storey to Melbourne Mills, Dalton Lane, Keighley, for Mr. Robert Clough. Messrs. Moore & Crabtree, architects, Keighley.

LONDON.—For painting exterior of Bethnal Green Military Hospital, Cambridge Heath, E. 2, for the Board of Guardians. Deposit £10. Messrs. Holman & Goodrham, 6 King's Bench Walk, E.C.

MERTHYR TYDFIL.—Dec. 31.—For completion of fourteen houses (exclusive of street works) at Gellifaelog, Penydarren, Merthyr Tydfil, for the Corporation. Borough architect, Merthyr Tydfil.

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Demobilisation and Resettlement.

THE attention of employers and workpeople is drawn to the activities of the Local Advisory Committee recently set up by the Minister of Labour in connection with the City of London Employment Exchange, 9 New Bridge Street, E.C. 4.

In addition to assisting the Exchange in its extensive work of supplying suitable men and women for clerical and professional occupations in the City, the primary functions of the Committee relate to the employment of men now being discharged from H.M. Forces (including questions as to the wages which ought to be paid to disabled men) and also to the arrangements for dealing with reconstruction problems from the labour point of view.

The Minister has been fortunate in securing Sir T. Vansittart Bowater, Bart., as Chairman of this Committee, together with many prominent citizens—representative of Employers and Labour Organisations—who are intimately acquainted with trade conditions in this area.

The Committee has already held several meetings and there seems every prospect that it will be able to render valuable assistance to the Government in achieving the important objects for which it has been established.

PLANS have been approved for new offices at the steelworks of Messrs. Cammell, Laird & Co., at Penistone.

SERGEANT E. CRAIG, Canadians, has been awarded the Military Medal. He is a son of Mr. Thomas Craig, builder, Downfield, Dundee.

THE Chepstow Rural Council have decided to ask the respective parish councils to submit suggestions as to the erection of additional cottages required.

THE surveyor to the Poole Town Council has been instructed to prepare plan and estimate of the cost of repairing the quay wall at Hamsworthy adjoining the proposed slipway.

NEW BRIGHTON Tower, 621 feet high, the tallest structure in England, standing on the Cheshire shore at the mouth of the Mersey, and one of the most picturesque buildings in the world, is to be demolished.

THE Ragusa Asphalte Co., Ltd., of Tredegar Road, Bow, E. 3, inform us that they have opened a branch at Manchester under the supervision of Mr. A. V. Ingram, who has spent a considerable number of years in the asphalte trade, and that their Manchester office will be at 100 King Street and their works Devonshire Street, Ardwick.

A SUB-COMMITTEE of Arbroath Town Council appointed to consider the establishment of new industries in the town reported to the Council that having considered the subject, they have prepared a register of sites suitable for the erection of works or dwelling houses in the town and neighbourhood containing particulars of the situation, acreage, probable price or feu payable, ground reserved for dwelling houses, and that for works.

MR. SAMPSON CLARK, of 58 Great Portland Street, London, W. 1, writes us asking our assistance on behalf of the shop assistant. He points out that under D.O.R.A. the closing limit has been, and still is, 8 o'clock. What is wanted is to make this 7 o'clock (except on one day) and a 48-hour working week (meal-times omitted) thus:—9 to 7 on four days, 9 to 1 on one day, 9 to 8 on one day. In the Colonies, such as New Zealand and Queensland (and others?), shop and store closing is already compulsory at 5 or 6 o'clock. It is felt that the present time is an exceptionally favourable one for making the change, as traders and public are more familiar with early closing through war conditions. We quite cordially agree with the idea of shorter hours for the shop assistant; particularly laying stress, however, on the need for quick and prompt attention to business during business hours.

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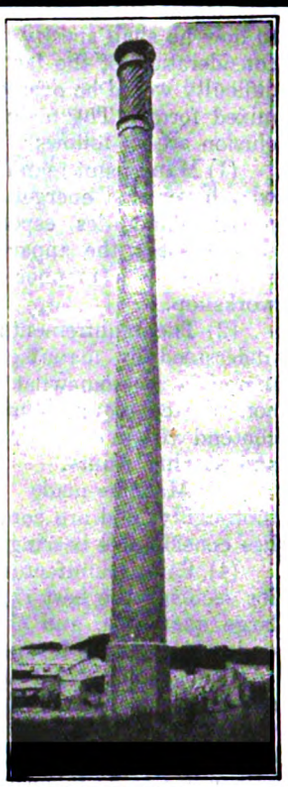
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The Society of Architects.

By F. LAWRANCE.

(*Concluded from page* 14, *Nov.* 29.)

HAVING now indicated the main changes that have taken place as regards the paint manufacturer's ingredients, I should not be surprised if I were told that all this leaves the architect in somewhat of a dilemma as to how he shall specify the ingredients of paint. A little consideration of the facts will show that a great deal of difficulty would be overcome by specifying paint in ready mixed form. The main arguments leading to this conclusion are as follows:

(1) Many paint manufacturers have technical chemists who have been energetically engaged in countering the present difficulties, especially as regards oils; moreover, they possess the apparatus necessary for manipulating materials in a manner quite impossible in a painter's workshop.

(2) The requirements of paints of all kinds are fully understood by manufacturers. Indeed, house painting materials are somewhat simple compared to some of the complicated requirements that the paint chemist has to contend with in other directions, such as dipping, spraying and stoving paints.

(3) Machine-made paints are mixed much more thoroughly, and are consistently uniform, a point which has considerable bearing on the durability of the product.

(4) Paint manufacturers are in a much better position for securing the best raw materials because they buy in large quantities, and can keep the materials constantly under proper tests for quality.

I would also point out that the question of finding a substitute for linseed oil demands more particular attention where white paint is concerned, because, besides dealing with the general characteristics of the oil, its colour has to be taken into consideration. It is for this reason that specialists, in the making of white pigments, are in the best position to offer reliable white paints, and if the advisability of specifying R.M. paints is granted, the safest plan obviously is to take advantage of the time and care that have been bestowed on these materials by manufacturers who specialise in this direction.

The main argument that has been put forward against R.M. paint is that it is not possible to make standard paints in three grades that would be suitable for all purposes and conditions. To some extent this is a feasible argument, but most painters are quite capable of making adjustments for special purposes, by intermixing various grades of paint.

Summarising, I make the following suggestions:—

1. That white paints give the most effective results when purchased in ready-mixed form at any time, but more particularly so at the present time.

2. That these paints should be obtained from specialists in white pigment, in grades suitable to the work in hand, and according to specification, the usual grades being priming, flat undercoating, inside glossy and outside glossy, from which intermixture could be made for special purposes.

3. That clear distinctions should be made between paints for interior use and paints for exterior use when ordering.

4. That zinc sulphide should be definitely prohibited in specification for outside paint.

5. That mineral oil and other non-oxidising oils should be prohibited in specifications for all classes of paint.

6. That where opportunity occurs for using coloured paints without offending artistic considerations their use effects an economy.

7. When coloured paints are used, these should be specified in R.M. form, in order to effect economy in white pigments.

8. The method of sizing and varnishing on new woodwork is open to consideration.

This brings me to the conclusion of the main subject of my Paper, but there is a broader aspect to the whole question that it is as well not to overlook. I have already pointed out that we have been brought back to first principles, and have to study the best means of painting afresh. This study accompanies a keen research respecting the suitability of certain materials for given purposes. The great value attaching to these facts and the possibilities they open up for the future need no demonstration. This is a supreme opportunity for architects to examine all specification phrases connected with painting in order to ascertain whether they really fit in with the best technical methods. I have shown that certain prejudices held by painters have been swept away, I believe for ever, by war conditions. It is left for the architects to demolish the ghosts of these prejudices if they exist when preparing their specifications in the future. For instance, I feel confident that the progressive painter who finds that he can obtain the highest possible results on certain classes of work with zinc paints will not be tied to genuine white lead, for the architect will surely realise that, valuable as the latter material is, zinc is at least equal to it for some purposes, and in the opinion of many, supersedes it.

On the assumption that reasons do exist for re-modelling certain specifications dealing with painters' work, perhaps a few suggestions bearing on its accomplishment will not be out of place. I make these proposals without being acquainted with any work that the Society may have already done in this direction, but in the hope that a view of the matter from the practical painters' angle may suggest some useful points.

My main suggestion is that specifications should leave room for alternatives by stipulating for materials of approved quality, and that this approval could be given on the knowledge of previous experience of a particular article.

I would suggest the following points as essential if fair results are to be obtained:—

(1) Surfaces should either be of new material, wood, plaster, cement, &c., similar to that for which the paint is recommended, or a previously painted surface of stability.

(2) All materials should be rendered clean previously to painting and free from damp.

(3) Paint should be spread out thinly, so that oxidisation of oils can take place in a thorough, even manner.

(4) Excess of heat in drying is not to be recommended.

(5) Exposure tests should be executed in the position that they are to occupy during the period of exposure, and in similar positions to those likely to occur in actual practice.

(6) Recommendations and instructions of manufacturers should be strictly adhered to. For instance, a paint recommended for ironwork, and perfectly suitable for the work, may give poor results if tested on a wood surface.

Again, if a paint is found too viscous for easy application it should be recorded as a fault against the paint; but a possible occurrence of a greater fault if the paint is thinned down (not according to instructions) could not fairly be so stigmatised.

(7) When tests are constantly washed for examination it is advisable to leave, say, half the board untouched, as constant abrasion effects wear and tear.

(8) Duplicate tests on different surfaces are desirable on grounds of doubtful character, as this often enables one to gauge the extent to which the characteristics of the ground contribute to the appearance and durability of the finish.

(9) For exterior exposure tests not less than four coats should be given, and the alternating system already mentioned in the previous part of this Paper should be given due consideration.

(10) Exterior paints will not necessarily give good results if applied over unsuitable undercoats, but they should not be condemned on that account.

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General.

BUCKINGHAM Rural District Council on Saturday decided to ask the landlords in the various parishes to build cottages.

A WELL-KNOWN Guildfordian has died in the person of Mr. R. Smith. He was sixty-three years of age, and was in business as a builder for forty years.

THE Rugby Rural District Council have decided to proceed with a scheme for the erection of 500 houses in their area, fifty of which will be built at New Bilton.

THE death is announced of Mr. James Meikle, Woodside, Carrick Road, Ayr, head of the firm of Messrs. J. & D. Meikle, builders and contractors. Mr. Meikle had been Master of Works and of Guild of the Burgh of Ayr since 1909.

IN view of the suspension of hostilities, the committee of the Oakwood Hall V.A.D. Hospital, Rotherham, have decided not to proceed further with their scheme for rebuilding the hospital.

FOR the purpose of manufacturing Hume concrete pipes, a factory has been established at Germiston, South Africa. Sixteen acres of land have been secured, and substantial buildings are about to be erected for the necessary works.

THE Alfreton Urban Council have approved the offer of Captain Palmer-Morewood of a site and £500 towards the cost of the erection of a permanent war memorial, and expressed the opinion that a hospital was highly desirable.

THE Wolverton war memorial is to take the form of the erection of a Memorial Hall. Also a memorial column, in the Square, and a fund to assist the dependents of those who have fallen.

IT has been decided by the Tanfield Urban District Council to erect 160 houses in their area under the Housing of the Working Classes Act. A hundred of these are to be allocated to the North Ward and the remainder to the South Ward.

AT Northampton the Housing Committee reported that it had agreed that 500 houses are required in Northampton. The Committee has inspected and is considering sites, and will submit to the Council in due course suggestions in regard thereto.

THE Westhoughton Urban District Council has notified the Local Government Board that they are prepared to provide such houses for the working classes as may be necessary in their district, that plans will be prepared as early as possible for 250 houses, and that certain sites have been selected.

DONCASTER Corporation last week approved a housing scheme comprising 380 houses on the Carr House site, 300 at Balby, and seventy on Warmsworth Road. It was stated that it will cost anything from £200.000 to £250,000, that it was absolutely necessary for the borough, and that if the Corporation did not put the houses up it would be done for them.

THE Housing and Town-planning Committee of the Bolton Corporation have purchased the Crompton Fold estate, bounded by Bury New Road and Long Lane, at a total cost of £12,000. The estate covers an area of 117¾ acres, and there is room allowing for twelve houses per acre for about 1,400 houses, together with a school to be provided by the Education Committee.

THE Aldershot Town Council have passed the following plans. Alterations to buildings St. George's Road, plans submitted by Mr. J. Charkham, approved subject to walls being not less than 9 inches thick for a distance not exceeding 11 feet from the top. Temporary roofing for Messrs. Gale & Polden, Wellington Works. Alteration to fire station.

A CONFERENCE on Restriction of Output will be held under the auspices of the Industrial Reconstruction Council on Tuesday, December 17, at 6 P.M., in the hall of the Institute of Journalists, 2 and 4 Tudor Street, E.C. 4. The subject will be introduced by Mr. Wilfrid Hill, of Birmingham, a member of the Whitley Committee, after which the discussion will be open. No tickets are necessary.

A MEETING of the Aberdeen House Proprietors' Association was held last week in the Imperial Hotel—Mr. George Morgan, builder, president in the chair. The meeting had under consideration various questions as to housing, the operation of the Land Act of 1915, and property tax as affecting owners of heritable property. It was resolved to make a change in the rules of the association whereby factors would become eligible as members.

THE Keighley Town Council scheme will provide for 300 houses, but delay in submission to the Local Government Board is caused by the difficulties of the acquisition of the necessary sites. A letter has been received from Messrs. John Brigg & Co., Ltd., offering a valuable piece of land for housing and building on town-planning lines, at cost of land at 1*s.* per square yard for one part and 9*d.* per square yard for the other.

THE Health Committee have reported to the Portsmouth Town Council that the arrangements for a provisional contract for the purchase of land on Portsdown Hill, belonging to the Thistlethwayte estate, had been made. The principal clauses of the provisional contract are as follows:—The purchase price is £52,000 for approximately 540 acres, which is freehold, subject to certain leases and tenancies and rights of way. The total rentals amount to about £1,000 per annum.

THE Blackburn Housing Committee have decided to recommend the acceptance of the Government's financial offer in connection with the erection of 500 houses which the Town Council agreed to build should the Government's offer be satisfactory, and subject to the Council's approval the preparation of schemes, consideration of sites, &c., will be immediately proceeded with.

THE Parish Council of St. Philip and James, Oxford, has decided as a thankoffering for the restoration of peace to carry out a scheme for the enlargement of Mary Chapel by building out an apse similar in design to that of the chancel. Sir Charles Nicholson has drawn out plans for the work, which has been in contemplation for some years. It is estimated to cost about £800.

THE Restoration Committee of St. Bartholomew-the-Great, Smithfield, appeals for subscriptions towards a sum of £2,000 for the acquisition of the remaining six bays of the East Walk of the Cloister of the old Norman Priory, now a stable, but known to contain arched entrance doorway to the Chapter House and to the dorter or dormitory of the monastery, while there is good reason to believe that the entrance to the slype or passage between the south transept and the Chapter House still exists 7 feet below the present ground level.

THE Local Government Board have held an inquiry into the application of the Horwich Urban District Council for sanction to borrow £2.230 for the purchase of land for the erection of working-class houses. Of this sum, £1,230 is for just over 16 acres of the Lower Brazley estate, at £75 an acre freehold, and £1,000 is for 20 acres on the old racecourse, on the border of Lever Park, which Lord Leverhulme has offered at £50 an acre freehold. The original intention of the Council was to build 250 houses, but it is now estimated that at least 400 are required.

IT has been decided at a general meeing held at Berkhamsted that the memorial to the memory of Old Berkhamstedians who have fallen in the war and the thankoffering for those who have been spared should take the form of a stained-glass west window in the school chapel, together with a record of the fallen, and a library and museum. It is hoped to raise at least £10.000. Further information can be obtained from the hon. secretaries, C. M. Cox and J. S. Morgan, Lincoln House, Berkhamsted, to whom promises of donations should be sent. The war record of the school shows that 1,184 "O.B.'s" are or have been serving, of whom 208 have been killed and 195 wounded. The honours gained include V.C., one; D.S.O., seventeen; Bar to D.S.O., three; C.M.G., four; C.I.E., two; C.B.E., one; M.C., eighty-two; Bar, six; M.M., five; A.F.C., one; D.S.C., one.

AT last week's meeting of the Leeds City Council, Mr. Carby Hall, as chairman of the Developments Committee, moved the approval of the purchase of 81¼ acres of land on the northern side of the North-Eastern Railway at Crossgates from Mr. Darcy Bruce Wilson at £300 per acre, and 53½ acres on the northern side of Stanningley Road, between Cockshott Lane and Houghley Ghyll, from Colonel W. H. Gott, at £300 per acre, for the purpose of erecting houses for the working classes. One or two of the Labour members criticised the price, and said it was far too high. Alderman E. C. Midgley asked for some definite statement as to the commitments of the Council with regard to these housing schemes. There were all kinds of rumours in the city. He had heard, for instance, such a sum as two millions. Alderman C. H. Wilson said if it was a case of sanctioning the erection of 5.000 houses it would mean an expenditure of two millions. But they were proposing for a start 2.000 houses, and that would mean approximately three-quarters of a million. If they were 8*s.* a week houses, and were let at 5*s.*, the Government intended to contribute part of the balance. The remainder of the balance would fall upon the ratepayers. The three-quarters of a million referred to the price of the houses only. One and threepence a yard for building land was not, in his opinion, at all an excessive price. It was not the cost of the land that was troubling them, but the cost of the houses. The resolutions were unanimously approved.

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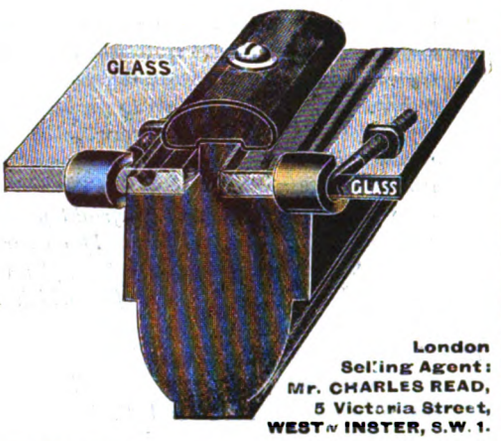
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THE
Architect and Contract Reporter.
FRIDAY, DECEMBER 20, 1918.

EDITORIAL NOTICES.

The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

ENEMY ADVERTISING.

This Journal is conducted in the interests of British Industry and of commercial and technical intercourse between the British Dominions and friendly Nations. Subject to the conditions of Peace, its pages will not be available for assisting the recovery of markets for German and Austrian goods.

CONTRACTS OPEN.

KEIGHLEY.—Dec. 20.—For work (except masons') required in reinstatement after fire and the erection of an additional storey to Melbourne Mills, Dalton Lane, Keighley, for Mr. Robert Clough. Messrs. Moore & Crabtree, architects, Keighley.

MERTHYR TYDFIL.—Dec. 31.—For completion of fourteen houses (exclusive of street works) at Gellifaelog, Penydarren, Merthyr Tydfil, for the Corporation. Borough architect, Merthyr Tydfil.

MERTHYR TYDFIL.—Dec. 31.—For erection of thirty-four workmen's cottages at Gellyfaelog, Penydarren, for the Corporation. Borough Architect, Merthyr.

TENDERS.

LONDON.

For sundry works, for the Metropolitan Asylums Board.

Accepted tenders.

St. Margaret's Hospital, provision of a mortuary and internal distempering works in connection therewith, C. H. Boyd & Son, £49 10*s.*; Brook War Hospital, renewal of copper tubes to four hot-water service heaters, Broughton Copper Co., £57 8*s.* 1*d.*; South-Eastern Hospital, repairs to gutters, roofs, and chimney stacks, L. Kazack, £78.

For additional lavatory at the town hall, for the Islington Borough Council.

J. Johnson, 40 Halton Road, Canonbury, 12 per cent. on prime cost (*accepted*); J. Mather, 20 per cent. on prime cost; McCormick & Sons, Ltd., 20 per cent. on prime cost.

For repairs to roofs at the Eastern Hospital, for the Metropolitan Asylums Board.

L. KAZAK, Hampstead (*recommended*)	£142 10 0
Engineer-in-chief's estimate	130 0 0

For repairs of roads at the Park Hospital, for the Metropolitan Asylums Board.

W. MANDERS & Co., Leyton (*recommended*)	£98 0 0
W. H. Wheeler & Co., Ltd.	135 0 0
Engineer-in-chief's estimate	145 0 0

For erection of a shelter for disinfecting apparatus at the Tunnel Avenue Depôt, for the Greenwich Borough Council.

W. MILLS & SONS, LTD. (*accepted*)	£359 0 0

STRETFORD.

For supply of switchgear, for the Urban District Council.

BRITISH WESTINGHOUSE Co., high-tension switchgear	£2,090 0 0
B. THOMAS, low-tension switchgear	2,482 0 0

WEST HAM.

For repair of corrugated-iron roof of dinner-room at Beckton Road School, for the West Ham Town Council.

H. C. HORSWILL (*recommended*)	£39 0 0

WOLVERHAMPTON.

For supply of boiler-feed regulators, &c., for the Town Council.

Accepted tenders.

CROSBY, LTD., five boiler-feed regulators	£247 0 0
WINDSOR & Co., brickwork for new boilers	200 0 0

Northamptonshire Association of Architects.

AT a meeting on Wednesday evening, before a representative gathering of the Northamptonshire Association of Architects, a paper was read by the Hon. Secretary, Mr. Herbert Norman, L.R.I.B.A., dealing with the subject of "Better Housing for the Working Classes." The paper was divided into two parts: (1) Housing schemes; (2) What is, and what should be, the architect's position in relation to such schemes?

At the conclusion of the paper a discussion was invited. The subject of housing schemes and what was required as to accommodation, houses to the acre, etc., produced little debate; but the second part aroused very keen criticism, which, briefly summarised, was as follows:—

What is the architect's position? The evidence was that, in the majority of cases where schemes are being initiated, no intention of architects being consulted is mentioned, but that it is being left in the hands of the local authority and to the tender mercies of their officials, and this notwithstanding the definitely expressed intention of the Local Government Board that architects should be employed in these building schemes.

What should be the architect's position? In the interests of the public he should be consulted at the very commencement to advise as to site and general lay-out, as the success or failure of the completed scheme is dependent upon this. Then there is the grouping balance, suitable detail, and appropriate design. The more modest the building the more careful should be the treatment. "Every one to his own last." If a better, brighter, and happier England is to be reconstructed, architects must be employed to do architects' work.

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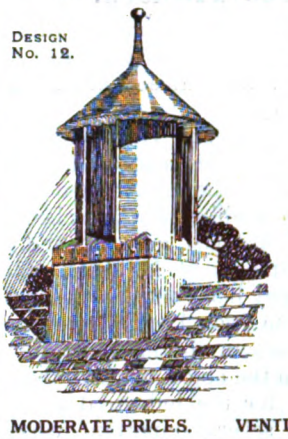
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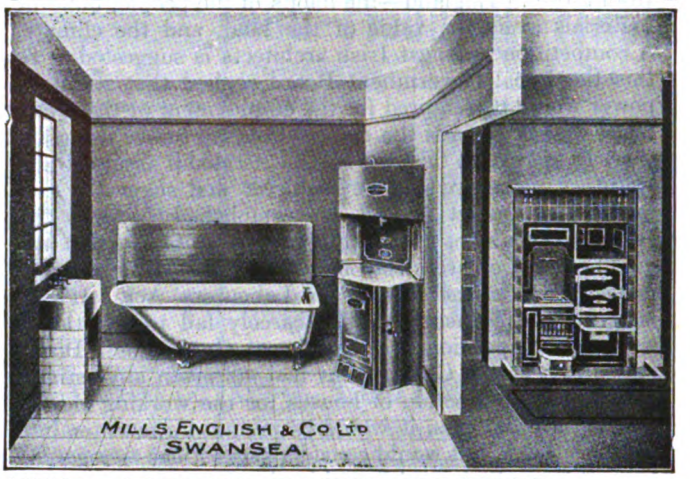


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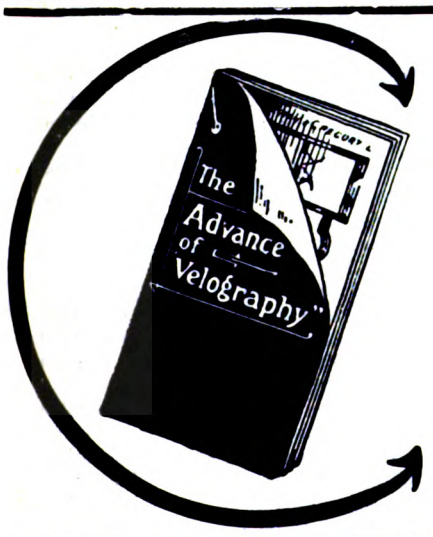
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Working Class Houses.

THE Royal Institute of Architects in Ireland has, through its hon. secretary, Mr. Frederick Hayes, forwarded correspondence to the Local Government Board on the question of the housing of the industrial classes in Ireland. In a letter to the Local Government Board the hon. secretary stated that the Council of his institute have had under consideration for some time the matter mentioned. The Royal Institute of British Architects approached the English Local Government Board last autumn, and the latter agreed to secure the employment for architects in housing schemes over which they had control. A similar assurance is requested from the Irish Local Government Board. Attention is also drawn to the competitions promoted in Great Britain with the object of obtaining the best typical plans of houses for the industrial classes. Conditions in Ireland differ in several important respects from those in England—the habits of the people, building materials available, value of the land, and the climate. A competition amongst Irish architects is suggested. To this the Local Government Board replied that statutory power would be required for the employment of the architects, and as regards the competition, no funds are available. In answer to this, the Institute stated it assumed that statutory powers would be required, and suggested that immediate contact should be established between the Local Government Board and the Institute, so that the qualifications of architects may be more definitely expressed than in the case of the Labourers' Act. It also suggests the Treasury would scarcely fail to sanction a sum for competitions. The Local Government Board stated that as the Government had not given any intimation about the erection of houses for the working classes in Irish urban areas, it would be premature to enter into any discussion, but would consider suggestions as regarded competitive plans. After this the Institute wrote the Chief Secretary that the Government had stated that one of the pressing problems after the war would be the erection of working class houses, and making the several points already given. The letter also set out that many of the rural dwellings are open to criticism, and that their maintenance entailed a heavy burden on the authorities. The hope was expressed the Irish Government would take steps in the matter on the lines indicated. The Chief Secretary, in reply, wrote he would bear in mind the representations of the Institute whenever the occasion should arise. So the correspondence closed.

Patent Specifications.

Selected by James D. Roots, M.I.Mech.E., Thanet House, Temple Bar, London.

No. 120,591 (March 18, 1918).—Jesse Clements, The Gables, London Road, Northfleet, Kent.—Building of concrete structures.

120,595 (Oct. 11, 1917).—F. P. Candy, The Homestead, Mulgrave Road, Cheam, Surrey.—Filtration of water.

120,631 (Nov. 16, 1917).—Joseph Baker & Sons, Ltd., Hythe Road, Willesden Junction, N.W. 10; Herbert Kirman, Hiewyn, Harrowdene Road, Wembley, Middlesex; C. E. Taroni, 100 Doyle Gardens, Harlesden, N.W.—Bakers' ovens.

120,636 (Nov. 23, 1917).—John Rigby, 40 Rishton Lane, Bolton, Lancs.; W. R. Taylor, 81 Davenport Street, Bolton.—Opening, closing and locking mechanism for the doors of hoists and the like.

120,641 (Nov. 27, 1917).—Thomas Potter, 22 Havelock Road, Croydon.—Glazing bars for glass roofs and other purposes.

120,650 (Nov. 28, 1917).—T. G. Gardner, 87 Ladysmith Avenue, Seven Kings, Essex; G. D. Hepburn, 13 Clifford Street, Ibrox, Glasgow.—Jib cranes.

120,667 (Jan. 16, 1918).—Edward Hanff, 71 Hatherly Street, Princess Park, Liverpool.—Repairing burst or fractured pipes.

120,615 (Nov. 13, 1917).—Henry Chaplin, 37 Birchills Street, Walsall, Staffordshire.—Padlocks.

120,670 (Jan. 22, 1918).—J. G. Evans, Kelleythorpe, Park Road, Hale, Cheshire; Albert Lowe, 12 Dartmouth Road, Chorlton-cum-Hardy, Manchester.—Construction of beams or girders.

120,235 (Oct. 15, 1917).—E. W. Hickling, 105 Fitzwilliam Street, and A. H. Hickling, 15 Hereford Street, Sheffield. Combined rules and protractors.

120,330 (March 8, 1918).—Waygood-Otis, Ltd., Falmouth Road, Great Dover Street, S.E. 1. Electric magnetic brakes used on winding gears for haulage lifts and the like.

Any of the above specifications may be obtained from J. D. Roots.

THE Newport Town Council at their last meeting agreed to an increase of salary to the borough architect.

HAMILTON Town Council are arranging for the erection of 200 houses. Government sanction has been secured.

THE death took place last week of Mr. Enoch Tonks, J.P., head of the firm of E. Tonks & Sons, lock manufacturers, of Temple Works, Willenhall.

THE Carlisle Corporation are pushing forward their housing scheme. At the last meeting instructions were given to prepare plans for 600 houses.

THE Kilkenny Corporation has decided on a scheme for the erection of 200 new workmen's houses. The estimated cost is £300 each.

A SERIOUS fire broke out on Wednesday morning of last week in the works of Messrs. J. & S. Phillips, tube manufacturers, of Shadwell Street, Birmingham.

THE Winsford Public Baths, which were erected as the Jubilee Memorial by Sir Joseph Verdin and Mr. W. K. Verdin, of Darnball, Hull, were destroyed by fire last week. The damage is estimated at £3,000.

THE Carlow (Ireland) Urban Council has decided to apply for a loan of £50,000 for the purpose of carrying out a housing scheme; a committee has been appointed to select sites.

LANCE-CORPORAL WILLIAM A. MANSON, 2nd Gordon Highlanders, has been awarded the Military Medal. Before enlisting he was in business with his father, Mr. William Manson, builder, Claremont Street, Aberdeen.

SERGEANT NORMAN MARPLES, Signal Section, R.E., who prior to joining up was employed by Messrs. Hy. Boot & Son, builders, Sheffield, and who has already been awarded the D.C.M., has now received the Military Medal.

PLANS were approved by Montrose Town Council last week of various buildings to be erected by the Coastal Construction Co., Ltd., on their shipbuilding yard at Rossie Island, Montrose, the drainage arrangement to be carried out to the satisfaction of the burgh surveyor.

ONE thousand houses are to be erected at Hebburn under the Local Government Board Housing Scheme. The District Council have approved plans for 300 three-roomed houses, 500 four-roomed, and 200 five-roomed, to be erected in blocks of twelve, ten, and eight respectively.

THE Dorking Urban Council have approved of two sites for the erection of ninety-one houses at the bottom of St. Paul's Road at its junction with Dene Street and the other between Hampstead Lane and Londes Place. The preparation of plans and the carrying out of the scheme has been left to the surveyor to the authority.

THE Northern Centre Conciliation Board has fixed the wages for bricklayers, joiners, masons, plasterers, woodcutting machinists at 1s. 7d. per hour flat rate for the Tyne and Blyth district, the advance to commence with first pay following December 11, and builders' labourers at 1s. 3½d. per hour flat rate from the same date.

SOME misapprehension has been created by the announcement of the arbitration award in the building trade wages dispute affecting Liverpool, Birkenhead, and Wirral. The award, it is now stated, will take effect as from the beginning of the first full pay following the date of the award—viz. December 4.

AT Romford Rural Council, Essex, the following plans submitted by Messrs. W. P. Griggs & Co., Ltd., were approved:—Four houses in Courteney Gardens, Upminster, a house in Deyncourt Gardens, Upminster, and four houses in Highview Gardens, Upminster. The acting surveyor was directed to report the by-law requiring the provision of a damp course and as to the material most suitable for the purpose.

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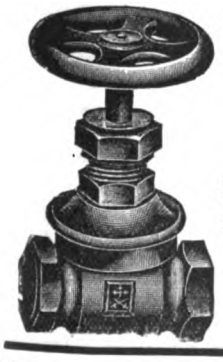
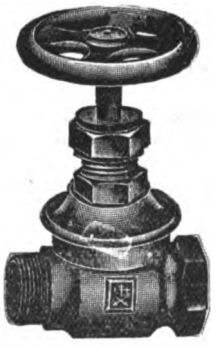
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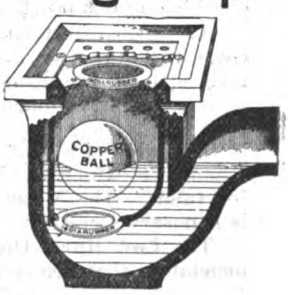
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General.

THE Newark Town Council have decided to send the Local Government Board plans for 100 artisan's houses.

A SCHEME for the erection of 200 additional houses has been adopted by the Holbech (Lincs.) Rural Council.

IT is proposed at Ealing to build 200 houses on 20 acres of land on the Gunnersbury Estate.

THE Burnley Corporation propose to purchase 23 acres of land at Old Hall, Burnley, for the purpose of erecting thereon new gasworks.

THE local builders at Epsom (Surrey) have arranged to meet representatives of their workmen at a round-table conference to discuss the wages question.

BLYTH Urban District Council has agreed on a scheme for the erection of 170 houses at a cost of £100,000 exclusive of the price of the land, and to let at £25 per annum.

MR. CHARLES M'INTOSH, retired builder, one of the oldest and best respected men in North Fife, died on December 9 in his eighty-fifth year.

WORK on the Welland Canal, between Lakes Erie and Ontario, which was suspended during the war, is to be resumed. The estimated cost before the war was £4,000,000, of which £2,400,000 has been spent.

AN order valued at £2,000,000 has been placed through the Canadian War Trade Board for 200,000 tons of steel rails to meet the demands of the Canadian Pacific, Grand Trunk, and Government railways.

A SCHEME has been set on foot to build a permanent church in the parish of Stainton Dale near Whitby, and a Building Committee, which has been appointed, has issued an appeal for funds. The Vicar, the Rev. E. J. Clark, B.A., B.D., is honorary secretary.

THE Leek Rural District Council have accepted a recommendation that 100 houses be erected at Baddeley Green for the working classes. It is also understood that the Whitfield Colliery Co. propose to erect about 100 houses in the Norton district.

THE suggestion for the Buxton war memorial is the erection of a building in the grounds of the Devonshire Hospital, fitted with the latest scientific equipment for the treatment of injured limbs, the required amount to be raised by public subscription.

WITH a view to encouraging the industry to increase the output of bricks to meet the prospective demand, it is the intention of the Minister of Munitions, provided the present system of control continues, to maintain the present controlled maximum prices for a period of six months from January 1 next.

AT a meeting of the Epsom Rural Council on Wednesday the surveyor reported that he had completed the building of the footbridge over the River Mole at River Lane, Fetcham, and it was resolved to apply to the Leatherhead Urban District Council for a proportion of the costs payable by them.

A LOCAL GOVERNMENT BOARD inquiry has been held at Lincoln into the application of the Corporation for sanction to borrow £150,000 for electricity purposes. The Corporation propose to purchase Messrs. Clayton & Shuttleworth's electric power station and to extend and adapt it as a generating station for supplying power to the various engineering works in the city and the public generally.

IT is stated that we shall not be able to get wood for building purposes. Why not? Have the German forests been destroyed during the war? It does not seem likely. And if not, how better can Germany pay her war bill than by exporting the raw materials of industry she produces? The Allies must not go short of timber while Germany has a tree standing.—"Pall Mall Gazette."

THE Manchester Corporation have informed the Local Government Board that it is proposed to proceed immediately with housing schemes on the Tebbutt Street site and Temple estate, and to prepare plans for providing about 2,000 houses on the Blackley estate and about 600 houses on the Gorton Mount estate. The Council is negotiating for the purchase of an estate on the south side of the city which will provide room for about 1,200 houses, while a sub-committee is also to be appointed to negotiate for the purchase of the Anson estate for the erection of working-class houses.

AT Penarth Council Chamber last week a meeting, comprising representatives of local public bodies and organisations, was held for the purpose of considering arrangements to celebrate the conclusion of peace and the question of a memorial to the fallen. A cottage hospital, town hall, and statue were amongst the suggestions made, but decision was left to a further meeting. In the meantime an effort will be made to secure subscriptions for a fund which it is hoped, will reach £20,000. Mr. F. W. Morgan was elected chairman of the committee, Mr. James German treasurer, and Mr. Samuel Thomas secretary.

THE Housing Committee of Dumbarton Town Council have written to the Local Government Board stating that the local authority is prepared to provide houses in terms of the Board's circular of March 18, and will have their scheme ready for submission at the earliest possible moment. In the first place Dumbarton purposes providing 500 houses. The necessary sites have not yet been acquired, but the local authority is in communication with the landowners. Plans are also to be obtained, and in this connection the local authority ask the Board for the services of one of their panel architects.

ONE of the questions at the General Election was finance of building. A deputation from the Housing Committee of the Dundee Town Council met Mr. Churchill to discuss the financial aspects of the housing question. Bailie Buist made a statement in favour of the views which have been generally agreed upon by the local authorities in Scotland, which approved of limiting the liabilities of these bodies to a penny in the £, the difference to be met by the Government. Mr. Churchill asked that he should be furnished with a written statement on the subject, and promised to make full inquiries. He agreed that it was not unreasonable that local authorities should desire to know the limit of their financial liabilities on the housing question.

AT a special meeting of Gainsborough Council the question of the provision of a suitable war memorial for the town was considered. Various schemes were submitted, among them a suggestion by Sir H. B. Bacon that the memorial should take the form of an out-patients' department and staff extension in connection with the John Coupland Hospital. Other suggestions were the provision of a Soldiers and Sailors' Institute and an inscribed monument. After a lengthy discussion it was decided that the approximate cost of these suggested schemes should be ascertained, and the selection of a scheme, and the best method of raising the necessary funds should be decided at a future meeting.

THE Committee on Production on November 20 heard a claim by representatives of all the operatives engaged in the building trade in Scotland for an advance of 6*d.* per hour on existing rates of wages. The committee have decided that workmen who since the outbreak of war have received general advances amounting to 4¾*d.* an hour and upwards, but less than 6¾*d.* an hour (including bonuses, and excluding advances arranged before August 4, 1914, which came into operation after that date), shall be paid such further increase as shall make the advances up to 6¾*d.* an hour over pre-war rates. In cases in which the general advances have amounted to less than 4¾*d.* an hour the workmen concerned shall receive a further increase of 2*d.* an hour. The advances are to be paid on the pay day in the week ending December 7, 1918.

THE draft scheme of the proposed cottage hospital and dispensary for Castleford, Normanton, and district has been approved by the committee, and provides for the treatment of cases from the townships named, and ten other townships surrounding them. The trustees elected are Colonel G. C. H. Wheler (Ledston Hall), Sir W. E. Garforth (Snydale Hall), Major Peake (Bawtry Hall), Mr. Walter Hargreaves, Mr. A. Woolley-Hart, and County Alderman A. Hartley. The general committee will comprise representatives of the various medical charity committees in the area, members of the medical profession, representatives of collieries and other industries, and also of religious denominations. The workers in the area are subscribing 1*d.* each per week for the maintenance of the institution, and already there is in hand over £2,600, £2,500 of which is invested in War Loan. A site for the building has not yet been decided upon.

THE Society of Antiquaries of Scotland has held their first evening meeting for the session in the library of the Museum of Antiquities, Edinburgh. The first paper by Mr. J. Graham Callander, secretary, gave an account of the discovery and examination of a short cist on the farm of Williamston, parish of St. Martin's, Perthshire. Within the cist were found human remains and the fragment of a bronze armlet or bracelet. The cist was typical of the Bronze Age. The armlet was in a very fragmentary condition. It appeared to have been of a similar type to two armlets found with a jet necklace in a cist at Melfort, Argyllshire. Mr. Callander also recorded the discovery of a cup-marked stone adjacent to the cist, showing eight cup-markings on the surface. The second paper was an account by Mr. G. A. Gardner of the existence of numerous communal mortars in the province of Cordoba, Argentine Republic.

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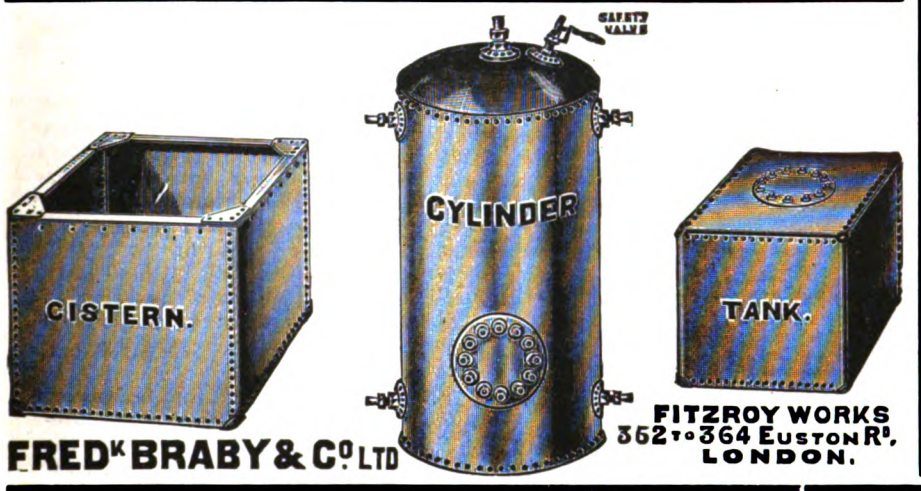
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The Editor will always be pleased to examine drawings or articles with a view to publication, but cannot be responsible for the safety of those sent, though every reasonable care will be taken. Contributors will be paid at our fixed rate unless a specific agreement is made, and contributors should state when writing whether they require payment. No payment will be made until after publication. A commission to prepare articles or drawings does not imply acceptance or approval until the actual matter sent has been approved by the Editor. Where photographs are sent for publication the senders must state at the outset if copyright fees for publication are due to the photographer. If no such statement is made the sender of such photographs will be held to have undertaken to pay any fees which may be legally demandable.

The Editor will be glad to receive from Architects results of Competitions, Tenders, and other particulars relating to works in progress both in London, the United Kingdom, our Colonies, and Foreign Countries.

The Editor wishes as far as possible to give the signature of contributors to their articles, both because they are entitled to the credit of their work and because it is our wish to give articles which are interesting and useful whether we agree with the specific views expressed or otherwise. Contributors should therefore state when writing whether they wish their signatures deleted; otherwise we shall hold ourselves at liberty to add them.

We shall make a point of inserting all letters which reach us on matters of interest and are suitably expressed, whether such letters contain criticism or otherwise, as we hold that free discussion on matters of interest is desirable.

TENDERS, ETC.

****** As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, Imperial Buildings, Ludgate Circus, London, E.C., not later than 2 P.M. on Thursdays.***

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MERTHYR TYDFIL.—Dec. 31.—For completion of fourteen houses (exclusive of street works) at Gellifaelog, Penydarren, Merthyr Tydfil, for the Corporation. Borough architect, Merthyr Tydfil.

MERTHYR TYDFIL.—Dec. 31.—For erection of thirty-four workmen's cottages at Gellyfaelog, Penydarren, for the Corporation. Borough Architect, Merthyr.

MESSRS. FREDERICK SAGE & CO., LTD., shopfitters, Gray's Inn Road, announce a dividend of 8 per cent. on their ordinary shares for the year ending September last. This is the best dividend the firm have paid during the past six years.

Proposed Cinema Competition, Grange-over-Sands.

MEMBERS of the Society of Architects are requested not to take part in this Competition without first ascertaining from the Secretary of the Society that the conditions have been approved by the Council.

THE French Academy of Fine Arts has adopted a scheme for a war memorial by converting Mont Valerin into a mausoleum for those who have fallen in the war.

MR. JAMES DENVER, the secretary of the Manchester, Salford and District Building Trades Employers' Federation, was at the half-yearly meeting presented with a silver tea service and a gold watch in recognition of special services rendered during the war period.

LIEUTENANT CHARLES W. GLASS, M.C., Argyll and Sutherland Highlanders, who has been awarded the Serbian Order of the White Eagle with cross swords, is the only son of Mr. R. L. Glass, Dailard, Hill Park, Pollokshaws. He served his apprenticeship as an architect with Messrs. Bryden & Robertson, Glasgow, and when he enlisted as a private in the H.L.I. in September 1914 he was employed in the office of the Master of Works, Edinburgh. He has been twice wounded, and once mentioned in dispatches.

A PUBLIC meeting at Axminster last week considered schemes to perpetuate the memory of the men from the parish who had fallen in the war. Dr. W. Langran presided. Canon Gandy proposed that a town hall be erected as a reminder to their children and their children's children of the day of England's greatest trial and of her greatest triumph. Rev. E. Bramwell seconded, and said the Church Council had considered the demolition of the Old Schools and the erection of a Church Institute as a thankoffering for peace. That had been abandoned in favour of the town scheme. The motion was carried, and a committee was appointed to make the arrangements.

A MEETING of the Housing and Town-planning Committee was held last week in Edinburgh Sir Thomas Hunter presiding. A resolution was adopted that it is necessary the Government should make a clear declaration that all local authorities undertaking housing schemes shall have their liability in connection therewith limited to the produce of 1*d.* per £. Discussion also took place with regard to the question of the supply of building materials, and the release of the necessary labour. The recent Government reports were dealt with, and it was eventually decided to go into the question in detail at a further meeting to be held in January. A resolution was adopted urging the Ministry of Supply forthwith to exert its influence towards the early release of the men needed for the production of building material for post-war housing, including sewers, roads, and relative works.

THE Lichfield housing scheme provides for 300 houses apportioned as follows to the districts coming under the Council:—

Parishes	Houses Proposed to be Erected
Alrewas	15
Armitage	16
Brereton	27
Kings Bromley	6
Burntwood	86
Colton	7
Curborough	2
Elford	4
Farewell	2
Fisherwick	2
Freeford, Fulfin, and Tamhorn	3
Hammerwich	16
Hamstall Ridware	3
Longdon	14
Mavesyn Ridware and Pipe Ridware	5
Ogley Hay Rural	3
Shenstone	23
Streethay	3
Swifen	2
Wall	3
Weeford	2
Whittington	14
Yoxall	11
Total	269

The Housing Committee recommend that a meeting of the Council be held on January 3 to approve.

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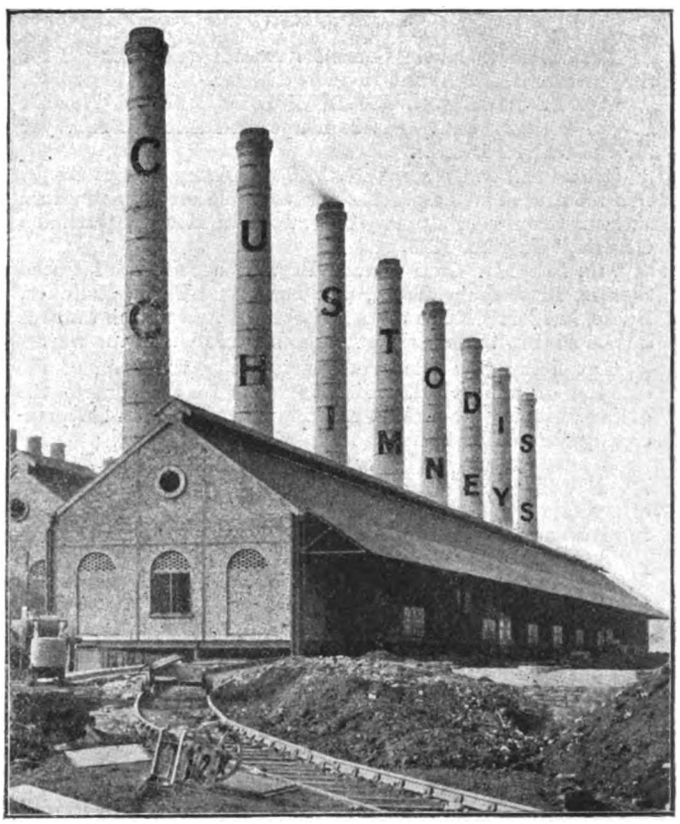
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General.

THE Holbeach Rural Council have adopted a scheme for the erection of 200 houses in their district.

MR. A. B. BROWN, F.S.I., of Lennox House, Norfolk Street, Strand, W.C., has been apointed diocesan surveyor for the Oxford Diocese.

CAPTAIN R. G. GOSLETT, M.C., Royal Army Service Corps, was mentioned in despatches for valuable services rendered in connection with military operations in Hedjaz, "London Gazette," July 10, 1918.

THE late Mr. Cecil Claude Brewer, architect, of Queen Square, Bloomsbury, W.C., and Town End Farm, Radnage, Bucks, has left £100 to the Architectural Association towards a memorial to those architects who have fallen in the war.

THE Selby war memorial is to take the form of the on of a hospital, which is to be in addition to the hospital at present existing and which is used principally for accident cases.

A STAINED-GLASS window has been placed in the Elswick d Wesleyan Church, Newcastle-on-Tyne, to the memory late Sir W. H. Stephenson. The ceremony of unveiling it was performed by Mr. J. R. Shaw.

THE Barnsley Town Council are about to apply for a Provisional Order to extend their borough by taking in the urban districts of Ardsley, Darton, and Monk Bretton. A committee is to be appointed to consider the question of the erection of a fitting war memorial to those who have fallen in the war.

THE architectural staff of the Derbyshire Education Committee is to be reduced by four in view of the fact that the erection of new buildings will not be practicable on the same scale as prior to the war for some considerable time. The four members, it was decided at the last meeting of the committee, are to be given notice terminating their engagement not later than six months after demobilisation.

THE Saltash Town Council in committee on the housing of the working classes recommended the preparation of a block plan of three groups of five houses in the Corporation field at the back of Westbourne Terrace; that the houses be semi-detached fronting New Road and the river with smaller back-to-back houses between; and that the plan provide for sixteen houses to an acre.

IT is proposed to erect a social club-house as a war memorial to the old boys of the East Ham Technical College Secondary School. Two tablets are also being placed in the college, one bearing the names of students who have fallen and the other a list of those who have gained decorations. Relatives are asked to supply particulars in order to make the list complete.

MR. M. J. BURKE, F.S.I., presided, and Mr. J. Howard Pentland, R.H.A., delivered a lecture at the last meeting of the Architectural Association of Ireland on "Notes on Sound as Affecting Design." He used lantern slides to illustrate his observations. An interesting discussion followed, and on the motion of Mr. H. G. Leaske, seconded by Mr. F. Giron, a vote of thanks was passed to Mr. Pentland.

THE Hull Education Committee have adopted a report approving of the following additional accommodation: New technical college, additions to the grammar school, new secondary school for East Hull, and ten new continuation schools, distributed over the city. The estimated cost of the technical college is £150,000, and the committee propose to proceed with the necessary plans forthwith.

AT the last meeting of the Huddersfield Town Council it was announced that the local textile industry had given a building and its up-to-date equipment for the extension of the Huddersfield Technical College. The building, which cost about £25,000, is in Queen Street South, opposite the Technical College. A consultative committee, on which Labour will be represented, will be appointed to advise the Technical College Governors in the carrying out of the scheme.

AT last week's meeting of the Improvements and Buildings Committee of the Manchester City Council Alderman Box, the deputy-chairman, was appointed chairman in the place of the late Alderman Wilson; Councillor Hewlett was appointed deputy-chairman. The late Alderman Wilson was chairman also of the Town-planning Committee. At a meeting yesterday Alderman Turnbull, the deputy-chairman, was appointed to succeed him, and Councillor T. R. Marr was appointed deputy-chairman.

AN influential committee has been appointed at Chelmsford to consider the question of a war memorial. One suggestion is for a memorial in a central position, a pedestal on which the Roll of Honour could be engraved supported by figures representing the Navy, Army, Air Service, and Royal Artillery, and supported by an emblematical figure representing the womanhood of the Empire. If carried out in marble the cost would be about £3,000, or a little more if in bronze. Another suggestion is for a children's hospital. The Federation of Discharged and Demobilised Soldiers and Sailors suggest the erection of 200 houses for disabled men and their dependents, where they might live rent free. The final suggestion is for a Victory Hall.

TWO glass windows have been placed in St. Barnabas' Church, Jesmond, Newcastle-on-Tyne. The inscriptions at the bases of the windows read as follows:—"To the glory of God and in memory of James Young, Second-Lieutenant, 5th Battalion D.L.I., born September 12, 1896, killed in action in France, August 24, 1918, age 22 years. To the glory of God and in memory of Lieutenant J. G. Nesbet, R.N.R., aged 28 years; Sergeant J. Denard, 2nd N.F., aged 28 years; Lance-Corporal W. E. Carver, 9th D.L.I., aged 47 years; Air-Mech. J. G. Walton, R.A.F., aged 40 years; Private E. L. Reed, R.O.C., aged 22 years; Sapper A. J. Wardhaugh, R.E., M.M., aged 19 years; Private W. Muris, South Wales Borderers, aged 31 years; Private J. D. Gristwood, 16th N.F., aged 24 years." The windows were unveiled by Captain Francis Lloyd.

ON the question of the Westminster war memorial the "Sheffield Daily Telegraph" says: "Is it discreet to place a modern Gothic building beside the peerless Westminster Abbey? Sir Charles Barry faced the test with his Houses of Parliament, and despite a certain resemblance to cardboard fretwork his design has both dignity and vitality. The Wesleyans, building opposite the Abbey, thought it safer to have a design as far removed as possible from Gothic, but most people think that the great dome of their central hall is incongruous and unhappy. The question now is whether, without destroying the setting of the Abbey, a twentieth century architect can be trusted to erect, beside the lovely Chapter House and replacing the quiet Georgian houses which now flank it, a great Gothic chapel or shrine as an Empire war memorial. The plans were submitted to a public meeting at Westminster. Experts must judge them, but lovers of the Abbey hope that the Government and the Chapter will be very careful in their decisions. Even Henry VII. when he added his world-famous Chapel to the Abbey detracted from the perfection of the great apse which previously ended it.

THE monthly meeting of the Edinburgh Architectural Association was held in the College of Art Hall—Mr. Thomas P. Marwick, architect, presiding—when Mr. Walter Oliphant, S.S.C.A., delivered a lantern lecture on "Some French Churches." The lecturer gave an account of the different architectural styles in France, and explained that the Monastic Orders, especially the Clunisians, contributed largely towards the development of French church architecture in the eleventh and twelfth centuries. The importance of the porch was pointed out, and examples were shown from Avignon, Arles, and St. Giles', showing the development of the southern porch, while later in the lecture the lecturer showed examples of northern porches, culminating in the triumph of French art—the portals at Rheims.

MR. FRANK WOOD, presiding over a meeting of the Society of Glass Technology at the Sheffield University, on Wednesday of last week, said the question of the formation of a Research Association for the whole glass industry was of the greatest importance. The Glass Controller had called a meeting to be held next Friday in London, and manufacturers had been invited to attend. The formation of a Research Association would not affect the work of the society; on the contrary, it would assist and further its objects. Without a Research Association all the valuable work done in London, Sheffield, and Stoke would be lost, as there would be no continuity about it. In addition, it seemed to him that the only way to finance the work done in Sheffield was to form a Research Association, and get a Government grant. Dr. W. C. Turner gave an interesting paper dealing with glass-bottle manufacture. He pointed out that in the past firms in the habit of using large quantities of certain kinds of glass bottles had tried in vain to obtain them in this country, and had been compelled to go to Germany. He showed the result of an analysis of a German soda syphon, and said that similar articles could be manufactured in this country. Discussing bottles used for medicines, Dr. Turner said he had made experiments showing that certain medicines such as contained arsenic or mercury absorbed the lime from bottles of inferior make, causing a sediment to form in the medicine. Greater care should be taken in the making of glass for medicine bottles.

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